ALL HANDS

In this issue
* NAVY REPORT
* FLEET ROUNDUP

This magazine is intended for 10 readers. All should ... it as soon as possible.
COPY ALONG

JANUARY 1959

ALL HANDS

THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN

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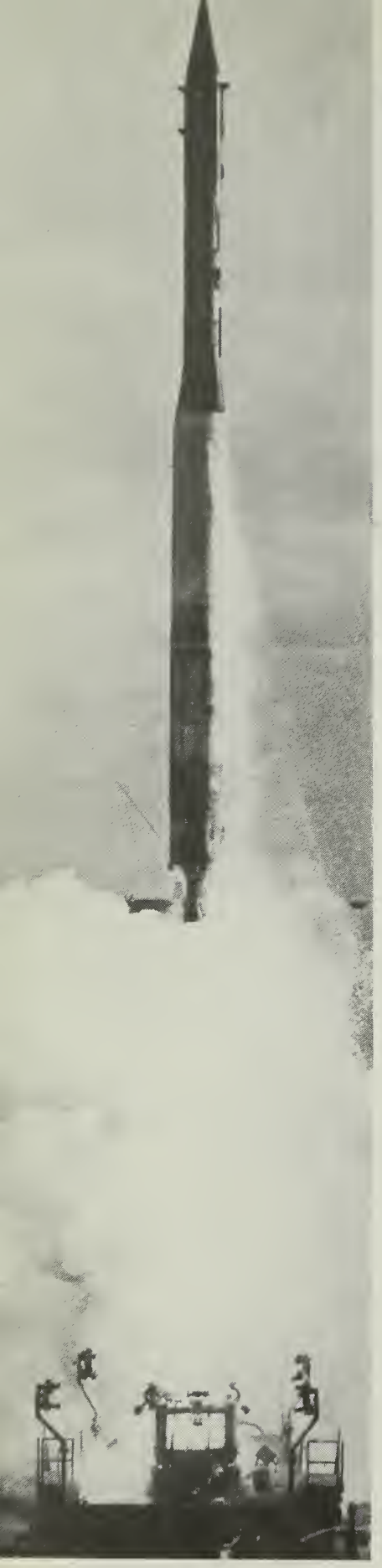
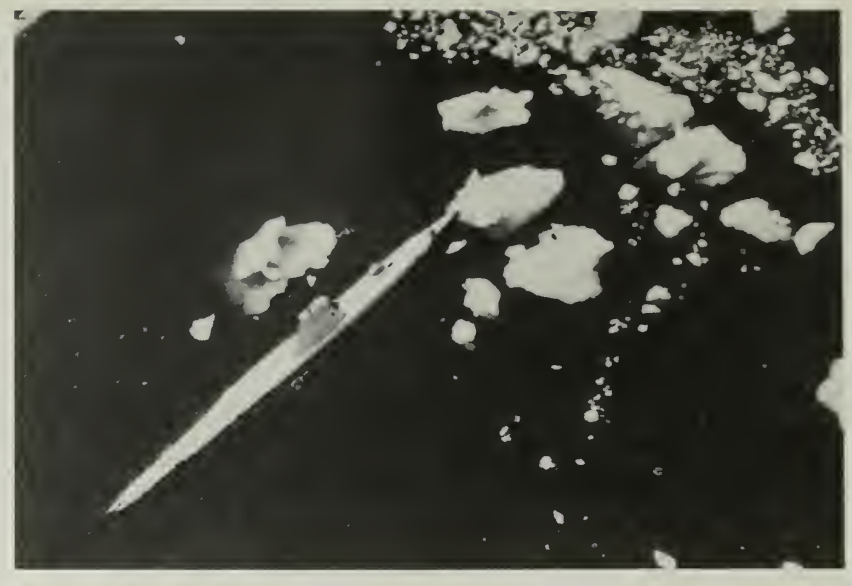
• **FRONT COVER: 'TRAPEZE' ARTIST**—A seaman from the first division of the attack aircraft carrier *USS Forrestol* (CVA 59) sprays one of the anchors from an electrical bos'n chair.

• **AT LEFT: HEAVY CRUISER** *USS Des Moines* (CA 134), flagship of the Sixth Fleet, lies moored in the French port of Toulon close to French cruiser *Emile Bertin*. Note the bollards in foreground of picture.

• **CREDITS:** All photographs published in ALL HANDS are official Department of Defense Photos unless otherwise designated.





LOOKING BACK

NINETEEN HUNDRED AND FIFTY-EIGHT is gone. It was an out-of-the-ordinary period in history—and perhaps the busiest peacetime year in the U. S. Navy's 183 years of existence.

To the average Navyman, the term "new Navy" has become more than slogan—it has arrived and he's in it. Missiles are here. Guns are going. Battleships are laid up in the Mothball Fleet. It's a Navy where leading roles are played by supersonic planes and atomic ships—we're well on the way to becoming an atomic Navy.

According to the Chief of Naval Operations, the Navy leads the world in nuclear power. It is also a world pioneer in having a family of guided missiles fully operational and deployed.

As we begin the new year, the U. S. Navy is carrying forward new projects in nuclear energy, ship and aircraft design, guided missiles and other weapon systems, and in human relations.

The Human Element

Many of these new technological challenges are creating new and continuing old personnel problems. No matter how advanced the new ship or weapon systems may be, they are useless unless they are placed in competent hands. Regardless of their complexity, they must still be wielded by a man—and that is a Navyman with the background, training and experience to run the new Navy of '59.

To meet changing requirements, the Navy has set up a vast training program involving hundreds of thousands of men. It begins at the recruit training centers and goes on to more advanced studies. One example: The highly technical nuclear training schools.

This expanded educational program makes the Navy, in a broad sense, one of the world's largest universities, and undoubtedly the one with the widest curriculum. Here are some interesting items:

- About two out of every three Navymen on active duty received specialized training during the past year at one or more of the 347 schools maintained by the Navy.
- In 1958 approximately 412,000 officers and enlisted men underwent instruction at the Navy's training facilities. Others received technical courses and advanced postgraduate training at civilian universities and industries.
- In 1958 the Navy stepped up its Advanced Education and Scientific College Programs for enlisted men, and offered more enlisted men the opportunity to seek a commission or to take advantage of one of the many officer candidate programs.
- In addition to its educational and training programs, the Navy launched studies, continued with existing programs or inaugurated new ones that are designed to im-

prove the careers of all Navymen. These range from improved Sea/Shore duty rotation policies to improved habitability conditions and greater emphasis on the art of understanding (and influencing) human behavior.

• As an example of the latter, the Secretary of the Navy, Thomas S. Gates, during the past year, (17 May to be exact), issued General Order 21, which reemphasized the taken-for-granted but often neglected responsibility of every Navyman—Leadership. In the midst of its tremendous advances in guided missiles, supersonic aircraft and nuclear ships, the Navy has not overlooked the moral, physical and spiritual needs of the individual. In this respect the Navy has stepped up its character guidance program, established new policies and means of informing its personnel on deployments, operating schedules, rights and benefits, and provided more recreational and sports facilities.

• A big morale booster was the enactment by Congress last year of the new pay bill which provided greater recompense to servicemen for their services.

• In addition to increasing basic pay, the new bill—officially called Public Law 85-422, which amended the Career Compensation Act of 1949—created the new E-8 and E-9 enlisted pay grades; and established the new proficiency pay program.

During 1958 the Navy continued with its modernization program designed to improve living quarters and make ships more comfortable and livable for the men who man them. Air conditioning, better lighting, new color schemes, roomier living spaces and lockers, foam rubber mattresses, individual reading lights and expanded recreational facilities are but a few examples of the many advances aboard ship that were made under this continuing program.

Improvement of existing barracks ashore and the construction of new ones, as well as modern housing units for the married Navyman and his family, were also undertaken throughout the past year.

At the beginning of 1958, there were more than 633,000 naval personnel on active duty. If you broke this figure down, you would find more than 556,000 enlisted personnel, about 72,000 officers and some 5500 officer candidates. During the year, in the face of crises in the Med and the Far East, Navy's strength rose to a peak of some 643,000. By mid-1959 it is expected to be down to 630,000, to meet reduced manpower quotas authorized for each of the armed services.

—A BIG YEAR

FLEET PROVED its readiness and mobility in 1958. *Right: Polaris* is test-fired.

NEW NUCLEARITES—*USS Skipjack,* SS(N) 585, combines speed of *Albacore* hull with A-power. *Right: USS Triton,* SSR(N) 586, is powered by two reactors.

Troubleshooting in the Med

World events in 1958 required the Navy to maintain its operating forces at their highest possible peak of readiness. At the same time it had to maintain additional combatant ships and an enlarged amphibious force with a reinforced Marine battalion in the Mediterranean because of the continued uncertain Middle East situation.

In the Lebanese crisis, amphibious units of the Sixth Fleet landed the first elements of Marines at Beirut just seven hours after the Navy received the order to go (see page 12).

On the second day of the Lebanese crisis, a total of 16 U. S. Navy ships were on hand in the event they were needed and another 1800 Marines were landed. ADM J. L. Holloway, USN, CINCNELM, in command of all operations in the area, shifted his flag from London to the amphibious group command ship USS *Taconic* (AGC 17) at Beirut.

Within three days after the initial landing, there were about 50 U. S. naval ships in the area and some 5400 Marines were ashore. On 18 July, additional replacements began arriving by air from U. S. Army installations in Europe.

From 15 July to 5 September, aircraft from the Sixth Fleet's Carrier Division Six flew more than 14,700 hours in some 6900 sorties while *Saratoga's* aircraft accounted for the remaining 4200 flights.

When conditions permitted, U. S. troops were withdrawn from Lebanon. The evacuation of U. S. troops was completed on 26 Oct 1958, when the last units boarded transport ships and aircraft to return to their regular duty stations in France and Germany, and aboard ships of the Sixth Fleet.

Troubleshooting in the Far East

There was a similar situation in the Western Pacific which also required more ships, planes and men to be on hand and ready in case they were needed.

In the Western Pacific, the possessions of another allied nation — Taiwan (Formosa) — were brought under attack. In Formosa strait, as in the Middle East, U. S. seapower was also on hand and ready. In this case, the Seventh Fleet was available to give needed escort assistance to the Chinese Nationalists so they could maintain an unbroken supply chain from Taiwan to their off-shore islands that were under fire.

Twice in rapid succession during 1958, the U. S. Navy was called upon to support allied nations with military strength. This was possible because of the readiness of the Sixth Fleet in the Mediterranean, and the Seventh Fleet in the Western Pacific.

While the Fleets were helping to guard world peace, other elements of the Navy were also busy.

Vanguard I Launched

On 17 March 1958, the Navy launched its historic Vanguard I test satellite which still circles the earth, and, from all indications, will continue to stay in orbit *for another 200 years.*

With four satellite launching still scheduled, Project Vanguard was transferred from the Navy on 1 Oct 1958 to the newly established National Aeronautics and Space Agency.

Project Vanguard, while under the Navy's control, was initiated, planned and carried through entirely as an IGY scientific venture. In 32 months, the Navy had designed and built a successful launching vehicle, constructed a series of scientific satellites containing a radically new line of highly sophisticated instruments and created a network of tracking stations.

Vanguard's techniques and hardware have been so highly regarded that they have been adopted for use in space vehicles. The second and third stages of the Vanguard rocket are being used in some moon shoots.

First Under the North Pole

During 1958, USS *Nautilus,* SS(N) 571,—the "Model T" and proudest of our nuclear submarines—marked the fourth anniversary of the commissioning by continuing her underwater exploits.

On 3 Aug 1958, under the command of CDR William R. Anderson, USN, *Nautilus* became the first ship in history to reach the North Pole. With that dramatic polar breakthrough, *Nautilus* and her crew of 13 officers and 97 enlisted men continued her long series of firsts which began back in January 1955 when she first got "underway under nuclear power."

Since beginning her initial trials, *Nautilus* has traveled about 150,000 miles on nuclear power and has completed numberless pioneer accomplishments. She went over 62,500 miles on her first charge of nuclear fuel and is still cruising on her second.

Although *Nautilus* was the first ship to make the polar underseas transit, USS *Skate,* SS(N) 578, wasted no time in making a visit to the North Pole. In so doing, moreover, *Skate* became the first submarine to conduct extensive operations in the polar area. With CDR James Calvert, USN, as CO, *Skate* (with a crew of 10 officers,

87 enlisted men and nine civilian technicians aboard) reached the North Pole on 11 August, just eight days after *Nautilus* broke the ice.

Record for Staying Down

Meanwhile, USS *Seawolf*, SS(N) 575, was not to be outdone by the Navy's first and third atomic subs. While they were undertaking their polar ventures, *Seawolf*, the second and largest of our commissioned atomic submarines, set out to make some history on her own. On 7 Aug 1958, two days out of New London, Conn., the flagship of the Atlantic Fleet Submarine Force submerged in what appeared to be another routine dive.

In a sense, the dive was routine, but *Seawolf's* 106-man crew had to wait for two months before their skipper, CAPT Richard B. Laning, USN, gave the command "Surface!"

In so doing, *Seawolf* established an underwater-cruising record of 60 days. In announcing this accomplishment at the White House, the President called it a record "that someone else is going to have a hard time to beat."

Her record almost doubled the old submergence record of 31 days, 5½ hours held by *Skate*. *Seawolf's* two-month stay underwater was considered to be of utmost value not only for submarine operation studies but also for space flights. It demonstrated that men can live for weeks and months using only purified and replenished air they have with them at the outset.

The 106 men in *Seawolf* used the same air that was in the hull when they submerged on 7 August. It was cleansed continuously by chemical filters and replenished occasionally by shots of pure oxygen carried in flasks. But at no time during the 60-day submergence did *Seawolf* come up to the surface for fresh air.

Progress in ASW

Today, ASW is one of the Navy's biggest responsibilities. While there are many problems to solve, great strides have been made in this field. A new job, that of ASW Readiness Executive to CNO, has been created, along with the Navy's Antisubmarine Defense Force with its three new Antisubmarine Task Groups—*Alfa*, *Bravo* and *Charlie*.

Alfa was established in April 1958, while *Bravo* and *Charlie* were both organized and became operational on 15 October. Both *Alfa* and *Bravo*, built around the ASW Support Carriers, USS *Valley Forge* (CVS 45) and USS *Wasp* (CVS 18) respectively, will concentrate on accelerating and developing new hunter-killer tactics; while *Charlie*, centered around USS *Mitscher* (DL 2), will stress convoy escort tactics, doctrine and equipment including joint operations between destroyers and long-range patrol aircraft.

As 1958 ended, the Navy continued to speed up development of its long-range detection capabilities. In the development stages were new antisubmarine weapons—both torpedoes and rocket-propelled—for faster, more accurate kill with both conventional and nuclear warheads. New, improved submarine detection equipment was in the process of being installed in many types of naval aircraft.

With new atomic depth bombs and rockets becoming operational, as well as more efficient homing torpedoes, rocket-assisted projecting devices, and advanced-data computers for solving the complex fire control problem, the Navy is steadily adding to its submarine "kill" probability. And the ASW weapons and detection equipment that are under development are based on radically new principles and will add further to the Navy's ASW capabilities.

Training and Readiness

Our ASW forces were not the only Fleet units to improve their capabilities during the year. Practically all Fleet units, at one time or another took part in at least one major training exercise in an effort to improve their state of readiness and to develop, test and evaluate new concepts.

Typical of the many major training operations conducted during 1958 was ***Operation Springboard*** which got underway in January and ended in March. It was conducted in waters adjacent to Puerto Rico, with more than 130 ships, including the carriers USS *Tarawa* (CVS 40) and *Valley Forge*, a large number of destroyers and submarines, among them the guided missile sub USS *Barbero* (SSG 317), and units of the Royal Canadian and Royal Netherlands navies.

Then in the Pacific there was

FAST MOVING Navy ships landed Marines at Beirut, Lebanon, only seven hours after Fleet received orders to go.

THREE AND THREE—Sharp-nosed *Crusader III*, Navy's all-weather push-button fighter carries *Sparrow III*, air-to-air guided missile during test flight.

Mantle Rock (15-22 Jan), with 30 ships and 300 planes from the Seventh Fleet; that was conducted over land and sea areas from northern Japan south to the Philippines; and ***Strongback*** during the latter part of February and early March, which featured more than 100 ships taking part in a large-scale amphibious landing that put 20,000 U. S. Marines and Philippine soldiers and Marines ashore on the east coast of Luzon.

Back in the Atlantic Fleet, ***Intex 1-58*** was held (13-24 Jan) with some 25 ships participating; and shortly thereafter ***Intex 2-58*** was held by 20 units of the Second Fleet as they were en route to join the Sixth Fleet.

The first major amphibious exercise to be held in the Atlantic Fleet since 1955 was conducted 13-31 March by some 60 ships and 260 aircraft manned by 40,000 bluejackets and Marines. This operation reached its climax when ships and men made an assault landing on Onslow Beach, N. C.

The "Fleet" cruise concept was used again in the summer of 1958 for training Naval Academy and NROTC midshipmen. In a series of three cruises—***Alfa 1***, ***Alfa 2*** and ***Xray 1***, the midshipmen moved directly into the organization of Sixth Fleet ships operating in the Med and ships of the Second Fleet that visited ports in Western Europe.

Other training exercises conducted during 1958 included:

- ***Oceanlink*** — A joint SEATO operation with ships of five nations participating.
- ***Tramid 1958*** — Two weeks of amphibious indoctrination for 875 USNA midshipmen and 50 Royal Canadian naval cadets.
- ***Rocky Shoals*** (2-11 Nov)—A PacFlt exercise which featured the first large-scale landing of Army troops by helicopter from ships at sea. More than 12,000 Navymen aboard 40 ships took part in this full-scale test of atomic age tactics which was climaxed by the landing of 13,000 Army troops.
- ***Midlink*** (3 Nov-24 Nov)—U.S. destroyers and subs joined ships from Baghdad Pact nations for three weeks of operations in the Arabian Sea.

These were but a few of the typical training exercises conducted throughout 1958. There were others of course, but too numerous to mention in this roundup.

Arctic Resupply

During 1958 the Navy again undertook the gigantic task of delivering extensive equipment and supplies to the Distant Early Warning Line sites that ring the Arctic Circle; the U.S. military commands in northeastern Canada and Greenland; and to the U.S. government Pribilof Island sealing station off the coast of Alaska.

These annual resupply expeditions to the Arctic are conducted by the Navy's Military Sea Transportation Service. Even though not so extensive as in past years, these operations involved more than 50 ships —including four Coast Guard and three civilian merchant marine vessels—in delivering over 220,000 measurement tons of dry cargo and over three million barrels of petroleum products to the Far North outposts.

Snow Goose Goes North

Speaking of northern exploits, a Navy blimp dubbed "Snow Goose" got into the act too. The airship, from the Navy's air development unit's ZPG-2, flew to within 500 miles of the North Pole—the farthest north that any U.S. Navy blimp has ever flown. Its mission was to conduct Arctic research (it also dropped mail and supplies to T-3, an island of ice used by U.S. scientists as a floating observation post).

Snow Goose headed north on 4 August, after several days' delay because of foul weather, and was hovering over the floating ice island well inside the Arctic Circle on 9 August. Flying low and slow, the blimp furnished a suitable research platform hundreds of miles from a landing area.

When the airship landed at NAS South Weymouth, Cape Cod, Mass., at the end of its journey, it had covered a round trip of 9400 miles. The final 3400 were ticked off in 78 hours, with a one-hour stop at Fort Churchill for fuel.

Navy at the South Pole

Deep Freeze IV got underway in August when nine ships, including icebreakers, oilers and cargo carriers plus a score of aircraft ranging from ski-equipped R4Ds to giant *Globemasters*, departed to provide support for the final phase of this country's IGY Antarctic Program scheduled to end on 31 Dec 1958.

The Navy's 1958 undertaking to the southernmost continent also provided the initial logistic support for the Antarctic Research Program (ARP) which took over U.S. scientific activity when IGY officially closed.

The basic mission of Deep Freeze IV was to bring new personnel and fresh supplies to the four stations to be maintained under ARP and to evacuate the 347 personnel (of these 71 were civilians and the others, Navymen) who were manning the remainder of the seven stations that were closed.

About 2700 officers and whitehats took part in the 1958-59 Deep Freeze IV resupply operation. Almost 200 of them will remain in the south polar region until the task force returns to pick them up in the winter of 1959. (It will be summer there of course.)

The nine ships of Deep Freeze IV transported more than 9000 measurement tons of cargo (40 cubic feet per measurement ton) while planes carried in another 300 short tons from New Zealand. In addition, a total of 2,150,000 gallons of aviation and automobile gasoline and diesel fuel were shipped to Antarctica.

Food supplies for Deep Freeze IV

ranged from a single pound of sesame seeds to about 33,000 pounds of choice, boneless beef. It takes nearly 2000 pounds to feed one man in Antarctica for one year.

In addition to the Fleet operations mentioned above, the every-day and little publicized operations of the Navy continued throughout 1958 as they will in years ahead. Some ships never left home waters, while others were on the go continually.

Status of Ships

At the end of 1958, the Navy was operating more than 580 combatant ships, over 210 auxiliaries and about 2500 yard and service craft. In addition to these, the Navy has more than 1330 combatant ships, over 350 auxiliaries and 2570 service craft mothballed or in a reserve status.

A breakdown of the active combatant ships includes 390 warships (cruisers, aircraft carriers, destroyers, and submarines), 85 patrol craft, more than 120 amphibious ships and 77 minecraft.

At the time of this writing, 14 new ships had been commissioned in 1958. They included the Navy's fourth and fifth atomic submarines, USS *Swordfish*, SS(N) 579, and *Sargo*, SS(N) 583; the conventional guided missile submarine USS *Grayback* (SSG 574); four destroyer type ships; three landing ship tanks; and four minecraft.

On the other hand, 75 ships were either decommissioned during 1958 or transferred to the Reserve Fleet for inactivation. They included the last of the Navy's two active battleships. USS *Iowa* (BB 61) was decommissioned on 24 February and USS *Wisconsin* (BB 64) hauled down her commissioning pennant on 8 March. For a complete listing of the ships which have joined or left the active Fleet during 1958, see next month's roundup in ALL HANDS.

Not since the conversion from sail to steam, the incorporation of armor into warship designs and the development of rifled guns, has naval construction faced such challenges and opportunities as confront the Navy today.

Throughout 1958 as in the past years, the Navy continued its attempts to prolong the efficient life of the now aging World War II ships which constitute the bulk of our operating forces. The Navy's shipbuilding efforts, however, have been bent toward exploiting the fast moving development in the fields of nuclear propulsion, guided missiles, electronics, hydrodynamics and gas turbines.

SEAGOING LAB—USS Observation Island (EAG 154) will test launching, fire control and navigational devices required for fleet ballistic missile *Polaris*.

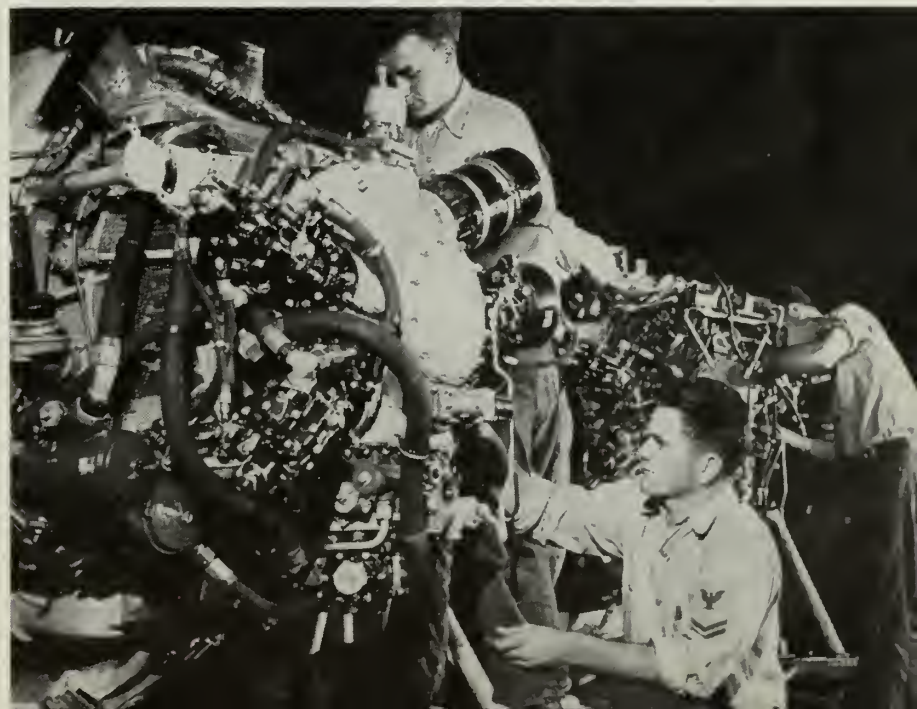
Much progress has been made in this respect. Here's a breakdown on the status of the ships of the new Navy:

Guided Missile Ships

All told there are 38 active ships equipped with or capable of handling guided missiles, and 64 more that have been authorized, are being built or are undergoing conversion.

At present, our active Fleet boasts of three guided missile cruisers *Boston* (CAG 1), *Canberra* (CAG 2), and *Galveston* (CLG 3); the guided missile destroyer USS *Gyatt* (DDG 1); four conventional *Regulus*-launching submarines—*Tunny* (SSG 282), *Barbero* (SSG 317), *Grayback* (SSG 574), *Growler* (577)—and four cruisers—USS *Helena* (CA 75), USS

TRAINING 1958—Navy training program soared ahead qualifying men on many levels in technical skills needed to keep Navy shipshape, in fighting trim.



Los Angeles (CA 135), USS *Macon* (CA 132) and *Toledo* (CA 133)—capable of firing *Regulus* missiles. To provide added offensive power, these ships are deployed in two areas—one Atlantic, one Pacific.

So far as the future goes, the following guided missile ships are underway:

• One nuclear-guided missile frigate—This was authorized under the Navy's current (Fiscal '59) shipbuilding program. This DLG(N) will be 550 feet long, have a beam of 56 feet and displace 7600 tons. It will have a much greater cruising range at sustained speeds than conventionally powered frigates. This first nuclear-powered destroyer-type ship will have twin *Terrier* missile mounts fore and aft, in addition to ASW weapons and conventional armament. It is scheduled to be delivered to the Navy in January 1962.

• Five nuclear-powered *Regulus*-launching subs have been authorized or are under construction.

• Nine Fleet Ballistic Missile Submarines capable of firing the *Polaris* missile were authorized during 1958. Construction has begun on five of them. The first *Polaris*-launching sub is expected to be operational in 1960.

• Nineteen DLGs have been authorized or are under construction. Five were launched in 1958.

• One nuclear-powered Guided Missile Cruiser—USS *Long Beach*, CG(N) 9, will be the Navy's first nuclear-powered surface ship and the first all-missile ship.

• Three carriers under construction—USS *Kitty Hawk* (CVA 63), USS *Constellation* (CVA 64) and the nuclear carrier, USS *Enterprise*, CVA(N) 65, will be missile equipped.

• Three heavy cruisers—USS *Albany* (CG 10), *Chicago* (CG 11), and *Columbus* (CG 12)—are being converted to handle *Talos* surface-to-air missiles.

• Two light cruisers—USS *Little Rock* (CLG 4) and *Oklahoma City* (CLG 5) are also being converted to be *Talos* launchers.

• Three light cruisers — USS *Providence* (CLG 6), *Springfield* (CLG 7) and *Topeka* (CLG 8)—are undergoing conversion to handle *Terrier* missiles.

It looks as though missiles are here to stay.

Nuclear-Powered Ships

Our active nuclear Fleet today numbers five ships. USS *Swordfish*, SS(N) 579, and SARGO, SS(N) 583, joined the Navy's operating forces in 1958, while *Seadragon*, SS(N) 584, *Skipjack*, SS(N) 585, and *Triton*, SS(N) 586, were launched.

While speaking of *Skipjack*, which will be commissioned any day now, Admiral Burke said: "We are proud of the fact that we have shown the world a new frontier in submarine warfare with a wholly new submarine combination in *Skipjack*. She is the forerunner of a whole new family of submarines—combining nuclear power with the highly maneuverable *Albacore* hull."

Triton is something to boast about too. She's the world's largest submarine—she's actually a submersible, three-deck, 6000-ton cruiser. *Triton* is the first submarine to be powered by two reactors as well as the first nuclear-powered radar picket sub. Her twin reactors will give her a top speed equal to that of a carrier task force, and she'll have a cruising range of about 112,000 miles without refueling.

In addition to the eight nuclear subs that are in the water, 25 more have been authorized or are under construction. With the nuclear-powered aircraft carrier USS *Enterprise*, CVA(N) 65, the nuclear guided missile cruiser *USS Long Beach*, and the yet unnamed nuclear-guided missile frigate, the U. S. Navy has a total of 36 nuclear ships in the works.

A brief count of the Navy's combatant warships, including the guided missile and nuclear ships mentioned above, shows the following:

TRYOUT — New underwater weapon systems are being developed, analyzed, changed and improved upon.

Aircraft carriers—26 active, four under construction and two being modernized.

Cruisers—15 active, one under construction, and eight being converted to guided missile ships.

Destroyers—240 active, 22 under construction.

Submarines—112 in commission, 21 more being built.

Add to this the strength of the Navy's *amphibious warfare ships*, *mine warfare ships*, *patrol ships*, auxiliary and service ships and you have a real sea punch.

Naval Aviation

The air arm, like all other major activities of the Navy during 1958, was directed toward the development of weapons to combat the ever-increasing submarine threat.

As of 31 Dec 1958 the Navy had approximately 7800 operating and 1900 logistic aircraft in service. Almost half of these were jets. These planes were divided among 17 carrier groups, 20 fixed wing and helicopter ASW squadrons, and 40 auxiliary units such as patrol, early warning, mining and reconnaissance squadrons.

For fighter-interceptor aircraft, the Navy is currently using the F3H *Demon*, the FJ-4 *Fury*, F8U-1 *Crusader*, the F11F *Tiger*, and the F4D *Skyray*.

For attack aircraft the Navy has the A3D *Skywarrier* and the A4D *Skyhawk*.

And the Navy has also been busy working on aircraft which will meet tomorrow's requirements. In the words of Vice Admiral Robert B. Pirie, USN, DCNO for Air, "Three such aircraft made their first flights during the summer of 1958. They were the F8U-3, the F4H and the A3J. Two of these—the F8U-3 and the F4H, already have flown at more than twice the speed of sound and well above today's operating altitudes.

"These planes, containing the latest in all-weather navigation, communication and fire control equipment and missile armament, are completely compatible with the *Forrestal*-class attack carriers," VADM Pirie said, "and soon will take their places within the air group complements. They will be followed closely by a new versatile

twin-jet attack plane for which the initial contract was awarded last August."

Today's carrier-based aircraft have available to them air-to-ground visual radio-guided weapons. Tomorrow's long-range, high-speed attack aircraft will have an air-to-surface missile with range measured in hundreds of miles and with the selection of a nuclear or conventional warhead.

VADM Pirie also pointed out that in addition to the basic fighter and attack aircraft, the Navy needs certain special function planes. In reconnaissance the trend is toward "all-weather multi-sensor aircraft capable of simultaneous exploitation of photography, electronic intercept, television, infrared and high resolution radar." A study is at present being made of the feasibility of applying this principle to one of the newer planes. In airborne early warning, a new model with improved electronic gear went through mock-up a year ago and in due time will be flying barrier patrols and controlling interceptors around our task forces.

The Navy's current ASW type aircraft includes the shore-based P2V *Neptune*, the P5M *Marlin* seaplane, and the carrier-based S2F *Tracker*. A new high-speed, long-range patrol plane, the P3N *Electra* has been developed and has been ordered into production.

A new helicopter with a longer range dunking sonar was tested successfully in 1958 and will join the Fleet this year. Previously, helicopters have been restricted to daytime ASW missions. They will now have an all-weather capability and will take their place as round-the-clock members of the Navy's ASW team.

Ordnance—Guided Missiles

As might be gathered from the foregoing, the emphasis in ordnance during the past year was almost exclusively on missiles. Of the 15 missiles in the Navy's armament, six are operational. Here's a brief summary of the status of each:

• ***Sidewinder*** is now the primary guided missile weapon used by aircraft squadrons in the Sixth Fleet in the Mediterranean and the Seventh Fleet in the Western Pacific. It will also be used in the air defense of the continental U. S. It is basically a defensive air-to-air weapon.

DUAL PIPES—Artist's painting shows Navy's new carrier-based A3J-1 now being tested. It will provide the Fleet with a supersonic weapons system.

Guided by an infrared or heat-seeking device, *Sidewinder* finds its target by homing on the heat of the aircraft. It is a relatively inexpensive and reliable weapon measuring about nine feet in length and weighing about 155 pounds. It is effective from sea level to 50,000 feet. It has very few moving parts, is moderately simple in construction, requires no specialized technical training to handle and assemble.

• ***Sidewinder -1C*** is in the development stage. It will provide higher speed and greater range than the present model.

• ***Regulus I*** was the first operational attack missile to join the Fleet. It is a ship-to-surface missile which resembles a small jet fighter. Its range is in the 500-mile class and it travels at "high" speed. It is capable of carrying a nuclear warhead, is powered by a turbojet and is guided by an electronic brain.

The Navy has announced that work on the *Regulus II*, a missile with a 1000-mile plus range, has been cancelled. While successful, the missile was cancelled to provide "the best balance in over-all weapons systems within the resources available."

• ***Terrier*** is an all-weather ship-to-air missile. Designed to intercept enemy aircraft at longer range and

NEW MEMBER of Navy's guided missile family was air-to-surface guided missile *Bullpup* for use against such shore targets as pill boxes, bridges, railroads.

higher altitudes than conventional antiaircraft guns, the 15-foot weapon weighs about one and one-half tons, and has a range of about 10 miles. It employs beam-riding guidance. As you may have noted earlier, two guided missile cruisers and one guided missile destroyer now in commission have *Terrier* missile capability.

• ***Sparrow III*** is replacing its predecessor *Sparrow I* in Fleet air defense. An air-to-air weapon, the new version is 12 feet long, weighs about 350 pounds, and can hit a speed of more than 1500 miles per hour. Navy fighters can carry from two to four *Sparrow IIIs*. It is the primary weapon for many present and all future all-weather fighters.

• ***Petrel*** is an air-to-surface weapon which is now being phased out of production.

• ***Talos*** is a supersonic ship-to-air little number which weighs about 3000 pounds, is powered by a 40,000-horsepower ramjet, and can reach extremely high altitudes, with a range of some 65 miles. One guided missile ship now in commission has *Talos*, capabilities, and six more cruisers, one nuclear-powered, are upcoming.

• ***Tartar*** is, says VADM John H. Sides, USN, Director, Weapons Systems Evaluation Group, "small enough to go into destroyers and the secondary batteries of large ships, yet have more performance than the original *Terrier*. It can replace the five-inch mounts." A junior version of the original *Terrier*, it has about the same range, but is designed especially for destroyer use. Three guided missile cruisers and 18 guided missile destroyers will have this ship-to-air missile aboard when commissioned.

NEW TWIST—New type ship propeller is now being tested at the David Taylor Model Basin. The 'super-cavitating' propeller takes advantage of the formation of a vacuum to develop increased speed.

• ***Polaris*** is the Navy's pride and joy. It will be an Intermediate Range Ballistic Missile with a range of about 1500 miles. It is designed especially for submarine use and, as a consequence, uses a solid-propellant fuel. A converted cargo ship, USS *Compass Island* (AG 153), is busily developing an accurate navigational system needed for accurate shipboard use of *Polaris*. As mentioned earlier, five nuclear subs capable of launching *Polaris* are under construction.

• ***Subroc*** will be along in due time. Right now, it's in the early developmental stage. A ship-to-surface missile, it can be fired from above or below the surface. According to theory, the *Subroc* system detects an enemy sub, computes its course and speed, then fires the missile. It does not, however, automatically paint a trophy on the conning tower.

• ***Bullpup*** is an air-to-surface missile designed for use by carrier-based Navy aircraft and shore-based Marine planes. Eleven feet long, weighing 540 pounds, it is relatively inexpensive, highly accurate and simple. It is intended to be used against comparatively small targets such as tanks and pill boxes. It becomes operational this year.

• ***Corvus,*** an air-to-surface missile, and ***Eagle,*** a long-range air-to-air missile, are under early development.

Pacific Missile Range

Meanwhile, a major missile test center, with a firing range extending far into the Pacific Ocean, is being established with headquarters at Point Mugu, Calif. Known officially as the "National Pacific Missile Range," it will be operated by the Navy for all U. S. military services.

The functions of Point Mugu will complement, not conflict with, those of Cape Canaveral. The latter will continue to specialize in research and development, with the Pacific Range handling some research and development but concentrating on missile training.

Supplemented by the southern portion of Cooke Air Force Base, near Lompoc, Calif., Point Mugu will constitute a range of some 500 miles along the coast and will, for the time being, extend 250 miles at sea. It will be gradually equipped to handle ICBM launchings along corridors extending far into the South Pacific.

Research and Development

In brief survey of the Navy's activities during 1958 such as this (well, relatively brief), the widely varying aspects of its Research and Development program cannot be adequately touched upon. To give some idea of its scope, here's a brief mention of a few of the projects that made news last year:

• Researchers are beginning to teach electronic computers to "think." Or, to express the above concept a little more technically,

IGY'S SUNNY SIDE—U.S. and New Zealand flags fly from mast on isle of Puka-Puka where Navy Research Lab and other IGY scientists studied eclipse.

it has been claimed "that a non-biological system is capable of perceiving, recognizing and identifying its surroundings without any human training or control."

The "non-biological system" in this case a computer, known as the "Perceptron" is claimed to have the ability not only to "learn" what it is shown, but also the capability of recognizing an object and then indicate what that object is, even though it has never seen it before.

• The ***Bathyscaphe Trieste*** will be used by the Office of Naval Research in research of the ocean depths off the Southern California coast. The 70-ton diving craft, developed by the Swiss scientists Auguste and Jacques Piccard, was purchased by the Navy to enable west coast oceanographers to conduct basic scientific research involving acoustical and biological investigations of the Pacific waters in the San Diego area. They hope to explore the ocean environment at great depths and to evaluate the bathyscaphe's potentialities as a research tool and as a deep-diving submarine rescue vessel.

Trieste is an underwater equivalent of a blimp, and is capable of exploring the ocean to a depth of more than three miles.

• Mark well the word "cavitation." You'll be hearing more of it. The word itself refers to the formation of a vacuum around a fast-moving propeller, but the ***"supercavitating propeller,"*** developed at the Navy's David Tayor Model Basin, makes it possible to achieve much higher ship speeds than formerly considered possible.

• This development ties in nicely with the recently introduced ***marine gas turbines.*** The new type propeller works best at high speeds, and so does the gas turbine. Enthusiasts claim that this is the first major step in propeller design in 30 years.

• In the field of basic research, the Navy has been as busy as usual. Basic research is that field of science in which the results are rarely visible and are seldom concrete for some time to come. But this is to a large extent what helps to make the "new" Navy. According to RADM Rawson Bennett, USN, Chief of Naval Research, the support of basic research is the primary mission of ONR, to the extent that four-fifths of its contract research funds are used for that purpose. More than

RESEARCH ABOVE—Navy and civilian scientists obtained much information on high altitudes last year. Here, rocket is readied during project Rockoon.

140 colleges and universities are engaged in basic research projects sponsored by ONR. In all, the Office of Naval Research currently has more than 1500 research contracts in various stages of progress.

Conclusion

In a report such as this, it is impossible to tell the entire story of the Navy in 1958 and today. Much of the story is left untold—not because of its lack of interest or importance but owing to the lack of space, and security restrictions.

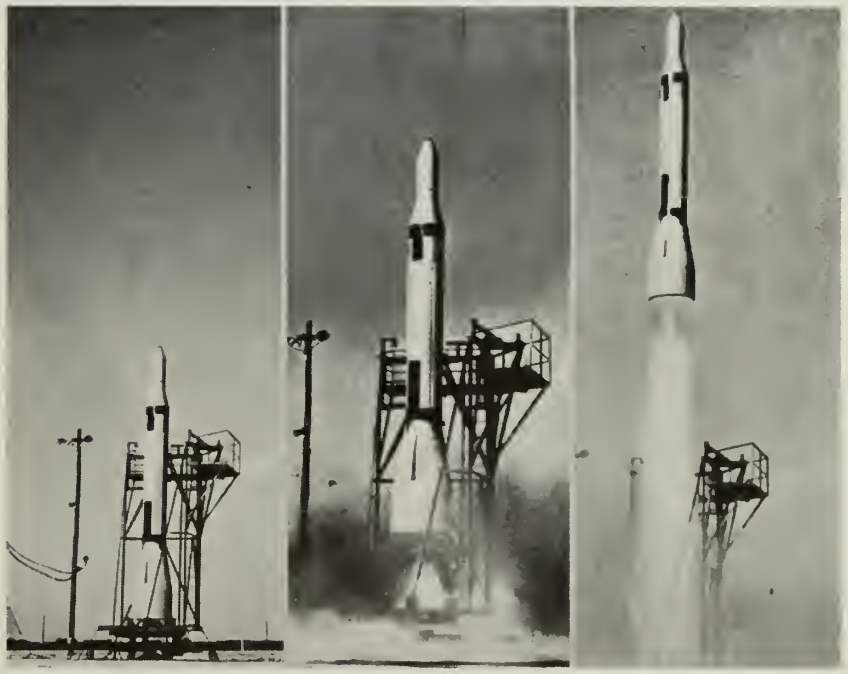
In summing up the Navy in 1958 and today, the Chief of Naval Operations, ADM A. A. Burke, has said:

• "We are proud of the progress we have made in strengthening the full range to handle the functions the Navy must perform in all kinds of wars—large and small—including cold war—and friendly missions of mercy.

• "We have led the world in nuclear power—in communications—in putting a whole family of guided missiles into our operating forces and in developing aircraft.

• "We in the Navy know . . . we will have to keep steaming at full power in order to retain control of the sea for the free world. We know we face the stiffest competition we have ever faced in the life of our nation."

H. George Baker, JOC, USN.



SOLID MAN—Solid-propelled test vehicle of Navy's *Polaris* Fleet ballistic missile blasts off from launching pad during tests at Cape Canaveral, Fla.

Sixth Fleet: Ace Trouble

THE U. S. SIXTH FLEET, operating in the Mediterranean, has earned its reputation as the "Friendly Fleet." It has built up this reputation in friendly acts and good will ashore in the 100 or more Mediterranean ports it has visited each year.

It has another reputation—that of power unleashed from the sea. In its defensive and offensive capabilities, it is able to deliver in a single attack more power than all of the combined Allied and Axis forces during World War II.

Commanded by Vice Admiral Clarence Ekstrom, USN, the U. S. Sixth Fleet is normally made up of over 50 ships and 25,000 men. During the recent Lebanon crisis, however, these numbers grew to over 70 ships and 35,000 men. About 200 planes are aboard its aircraft carriers. Described by many as the most powerful striking force in the world, the Fleet is organized into three main functional task forces.

Two large carriers, USS *Randolph* (CVA) and *Forrestal* (CVA 59) the heavy cruisers, USS *Des Moines* (CA 134) (Sixth Fleet Flagship), and USS *Newport News* (CA 148) together with some 20 destroyers, make up the Attack Carrier Striking Force (*Task Force 60*).

This force is the main striking arm of the Fleet. The attack carriers are equipped with both jet fighter aircraft and jet bombers. Included aboard are the *Skywarrior* and *Banshee* jets, with atomic bomb carrying capabilities, together with the supersonic *Crusader*. They have a striking radius of 1000 miles and can operate around the clock under any weather conditions.

Besides these planes, which are equipped with air-to-air missiles, a guided missile ship with the *Terrier* missile is normally in the Fleet. (Sixth Fleet ships are also capable of using the surface-to-surface *Regulus* missile, but are not now equipped to fire it.)

MISSILE MIGHT—Guided missile cruiser *USS Boston* (CAG 1) cruises Med.

THE AMPHIBIOUS FORCE is represented in the Sixth Fleet by *Task Force 61*. Consisting of over 15 amphibious ships, this task force has aboard a reinforced battalion—normally 1800 men—of combat-loaded and combat-ready Marines. Ships of this force, lead by the amphibious force command ship, USS *Pocono* (AGC 16), include attack transports, cargo ships, minesweepers, and assault ships.

The Fleet grocery stores, gas stations, repair shops, and hardware stores, make up *Task Force 63*. This is the Service Force. It consists of auxiliary ships and includes tankers, repair ships, and a variety of supply and provision ships. It is because of these ships that the U. S. Sixth Fleet can maintain its high state of readiness several thousand miles from home port. The Sixth Fleet can operate completely free from any port outside the east coast of the United States.

Periodically—and in time of crisis—the Fleet is augmented by a special Hunter-Killer force, making up *Task Force 66*. This force, consisting of a carrier with specialized air group and accompanied by destroyers, is responsible for seeking out and destroying enemy submarines.

DURING the crisis in Lebanon, this task force, headed by the antisubmarine aircraft carrier USS *Wasp* (CVS 18), was present with the Sixth Fleet. Movements of the task force are completely unscheduled and the length of time it remains in one Fleet is unknown.

All ships of the Sixth Fleet, except the flagship, rotate every four to six months. Flagship duty lasts two years. Because of this extended tour

Shooters

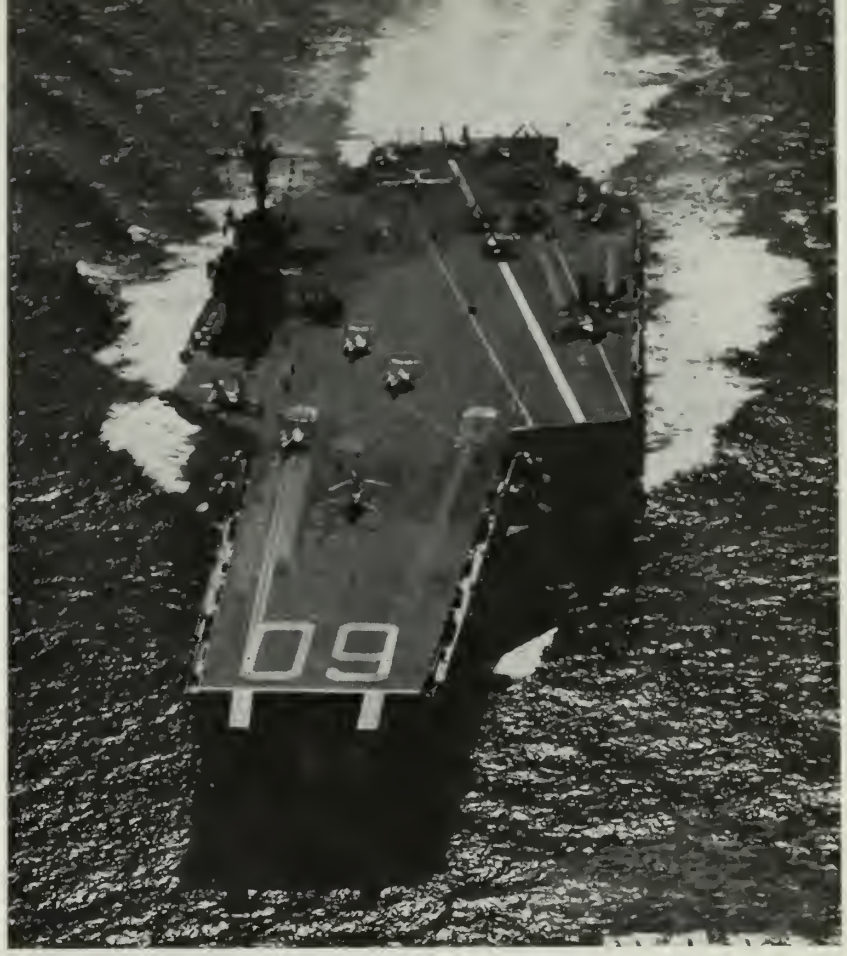
overseas, Villefranche, France, is used as the overseas homeport of COMSIXTHFLT. Most of the families of flagship personnel who reside overseas, live at Villefranche. Several auxiliary ships also have overseas homeports — at Barcelona, Spain, and Naples, Italy.

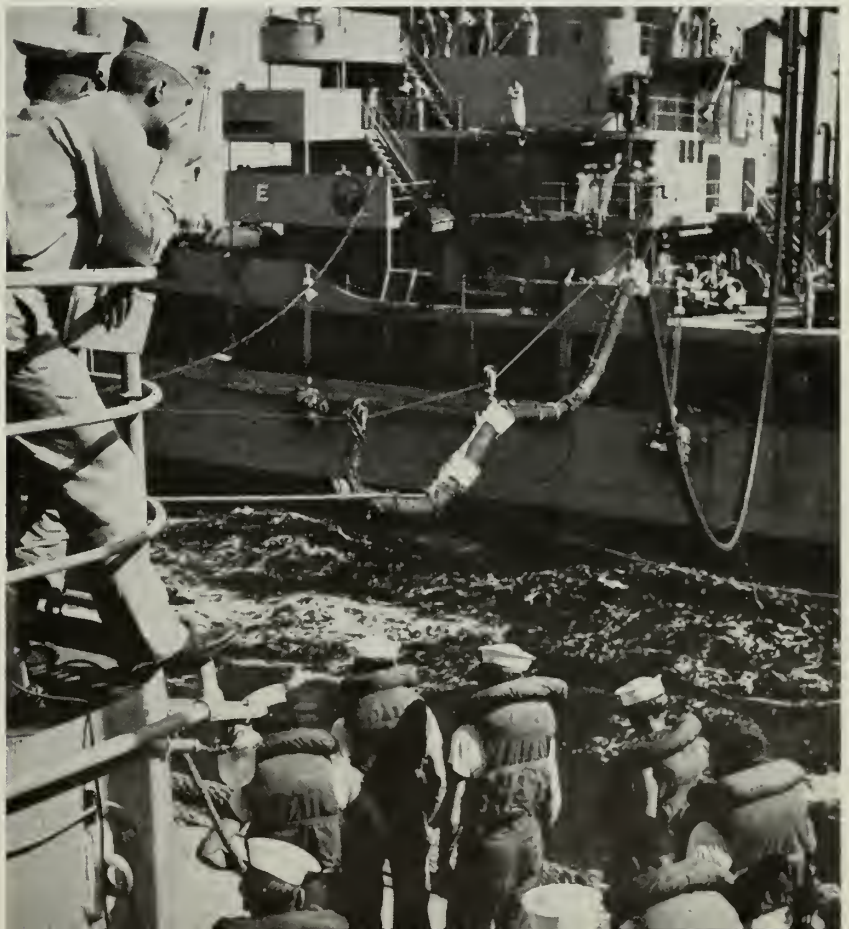
This is the mission of the Sixth Fleet:

- To help preserve the peace.
- To assure Mediterranean countries of our friendship and readiness to help them.
- To protect and support United States citizens, interests and policies in the Mediterranean area.
- To be prepared to carry out such wartime assignments as higher United States or NATO command may order.
- To perfect working relationships with our friends and allies.
- To provide realistic training for ships and men of the Navy.
- To familiarize U.S. Navy personnel with this strategic area of the world.

THE SIXTH FLEET has both national responsibilities and responsibilities under the North Atlantic Treaty Organization (NATO). In the U.S. chain of command, it is a subordinate operational command of Admiral James L. Holloway, Jr., USN, Commander in Chief, U.S. Naval Forces, Eastern Atlantic and Mediterranean (CINCNELM). Admiral Holloway maintains his permanent headquarters in London, England. On occasions, however, such as the affair in Lebanon, Admiral Holloway moves his headquarters to a ship in the Sixth Fleet.

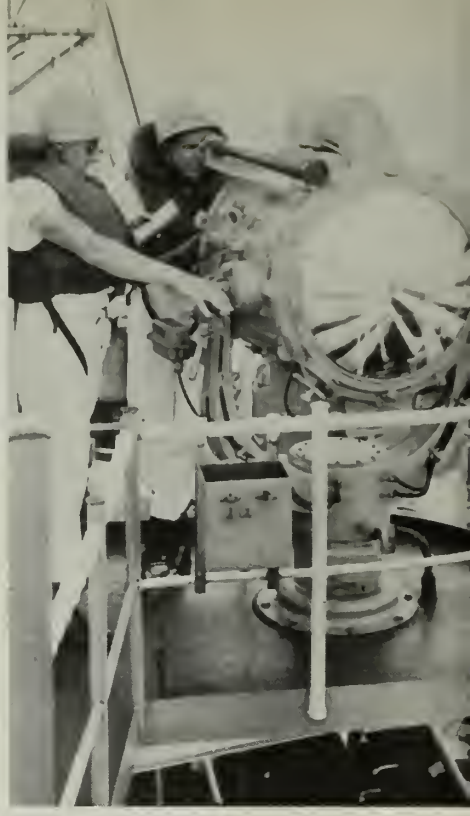
When operating in NATO capacity, the Commander Sixth Fleet is known as Commander Naval Striking and Support Forces Southern Europe (COMSTRIKFORSOUTH), and reports to Commander-in-Chief, Allied Forces, South Europe (CINCSOUTH). Admiral Robert P. Briscoe, USN, has recently been relieved as CINCSOUTH by the former Commander Sixth Fleet, Vice Admiral Charles R."Cat" Brown, USN. VADM Brown was himself relieved as COMSIXTHFLT by VADM Clarence Ekstrom late in September this year.





MOBILE MIGHT—Sixth Fleet can operate overseas from ports on east coast of U.S. *Above: USS Saratoga* (CVA 60) is floating air base. *Below:* Oiler fuels CA.

FANTAIL CROSSING—*USS Wadleigh* (DD 689) and *USS Barry* (DD 933) pass Fleet flagship at Rhodes. *Below:* Men of *USS Des Moines* (CA 134) hold drill.



FLASHY—Message is passed at sea.

Vice Admiral Brown has been promoted to the four-star rank of Admiral with his new job.

To carry out his NATO planning responsibilities, Commander Sixth Fleet has a second staff of about 30 officers and 100 enlisted men based at Naples and administered by his NATO deputy. Commander Sixth Fleet himself is always afloat.

THE FLEET UNITS spend about half their time engaged in U.S. and NATO training exercises at sea. This includes an occasional bilateral and trilateral exercise with friends and allies. The other half of the time they visit approximately 100 ports lining the million-square-mile Mediterranean. In a normal year the Fleet makes two complete swings around the Mediterranean, visiting the Eastern "Med" in the spring and fall, and the Western "Med" in the summer and winter. Periods at sea and in port generally vary from seven to 10 days.

While some exercise time is allocated for maintaining a ship's already acquired basic skills, the primary emphasis in the Fleet is on the development of advanced task force and Fleet coordination. This training culminates periodically in combined operations with our NATO allies.

All exercises at sea are designed to keep naval capabilities in offense and defense at a peak of readiness

FLEET FACES—Sixth Fleet sailors are ambassadors of good will when they visit the Mediterranean ports.

and efficiency. These exercises include air strikes, air defense, antisubmarine warfare, underway replenishment, mine warfare and amphibious landings.

Because overseas bases are often subject to changing political tensions, the entire Fleet, except the cruiser flagship and some auxiliaries, is based on the east coast of the United States. The Fleet can shift its potential striking force from one end of the Mediterranean to the other without relying on any foreign port for supplies.

AT SEA, the job of the Fleet is to achieve and maintain a peak of combat readiness. In port its mission is to promote good will, understanding, respect and acceptance. This is done both through official contacts and simple people-to-people relationships. Each man in uniform is an ambassador of good will and is expected to act like one.

Mindful, however, that one thoughtless man, through irresponsible behavior, can undo the good work of thousands the command gives a great deal of continuing attention to maintaining high standards of conduct ashore. If shore patrol reports exceed one for each thousand men on liberty, the situation is a matter of concern to the Fleet commander.

Before entering a port all hands receive information on the port's place in history, its famous landmarks, and the customs and traditions of the people and of the country.

The Fleet has been so active for so long in promoting good international relations that many of its activities have been institutionalized. Normally about 1500 individual shipboard parties a year are given for underprivileged children in ports around the Mediterranean. Sports contests between ship teams and local teams are common features of port visits. Church parties from ships worship in churches ashore.

Exchanges of official calls and entertainments are a fixed part of all port visits. The senior officer present spends the entire first day in port calling on local officials, and the first evening at an official reception. On the second day the local authorities return his call on shipboard and, whenever possible, a reception is held on board the flagship to repay courtesies of the local population.

REFUELING—Sixth Fleet carrier *USS Franklin D. Roosevelt* (CVA 42) and a destroyer take on supply of fuel from Fleet oiler *USS Canisteo* (AO 99).

ON LAND TOO—Marines of Sixth Fleet move inland from Mediterranean shores during amphib landing exercise demonstrated for Spanish military men.

Greeting the press and local welfare committees, attending a variety of church services and public celebrations, and reviewing parades and responding to invitations to deliver speeches, round out a consistently crowded in-port schedule.

SHIPS OF THE FLEET are opened for public visiting in ports all over the Mediterranean. Ashore, enormous crowds turn out to hear ship bands play at public concerts.

Navymen tour the great, historic, or simply interesting cities and tourist spots in Europe. Special tours are arranged to such inland cities as Paris, Rome, Marrakech (Morocco), and Athens. It is estimated that the men of the Fleet spend more than five million dollars annually in their travels around the Med area.

The traditional alacrity of the Fleet in responding to disaster, and the legendary generosity of the Navyman in helping those in need, have won for the Sixth Fleet its reputation as "The Friendly Fleet."

The Sixth Fleet's response to the Greek people after an earthquake and flood in 1953 is a good example. Ships ranging from aircraft carriers to small amphibious craft rushed food, clothing, fresh water, and medical supplies to the stricken people. The aircraft carrier USS *Franklin D. Roosevelt* (CVA 42) set up a communications center to coordinate mercy missions while hospital corpsmen evacuated seriously injured persons to field hospitals.

During the Suez crisis in 1956, the Sixth Fleet again swung into action. This time ships of the Fleet evacuated Americans and foreign nationals from Egypt and Israel.

The Sixth Fleet took positive action again when trouble began in Lebanon. Under orders from Washington, Vice Admiral Charles R. Brown put a reinforced battalion of battle-ready U.S. Marines ashore to help the government of Lebanon keep peace and to help protect the American people and property in that country. Later, more Marines and sustaining supplies were landed.

THE SIXTH FLEET is a happy Fleet. Morale is consistently high. Most sailors consider it one of the best assignments in the sea-going Navy.

Mail is flown almost daily from shore points to the carriers and redistributed to ships in company by helicopter or highline. Mail reaches men at sea about four to six days after being mailed in the United States. Movies are shown each night whether at sea or in port.

These are historic waters. U.S.

IN THE AIR—Carrier planes extend Fleet's protective air arm. Here, cruisermen watch launching of jet plane.

ships have sailed the "Med" since the beginning of the war with Tripoli in 1802 and almost continuously since 1886.

In the unsettled years following World War I, U.S. Navy ships in the Mediterranean squadron helped to establish peace among the countries of the Balkans and the Middle East.

In World War II, the Mediterranean again played an important part in U.S. plans. U.S. naval forces supported the November 1942 landing in North Africa; the Sicilian landings of July and August 1943; the first landings in Italy during September and October 1943; and the Anzio landings of January 1944. On 15 Aug 1944, powerful U.S. naval sea and air forces landed in Southern France as a sequel to Allied landings in Normandy.

The performance of U.S. naval forces in the Atlantic and Mediterranean theaters played a decisive part in the victory of the Allied nations in Europe.

In the spring of 1945, over-all naval strength in the Mediterranean was reduced, leaving only a small naval detachment in Italy to support the U.S. Army, to assist U.S. merchant shipping, and to continue representation on the Allied Commission in Italy.

During the summer of 1945 naval activities in the Mediterranean were further reduced. Liberated ports were rapidly returned to national authorities and many ships of the Mediterranean Fleet were redeployed to the Pacific.

At the end of World War II, however, the United States Navy continued to maintain some ships in the strategic Mediterranean to protect American interests and to support United States policies in the area. This small postwar Fleet, known as Naval Forces, Mediterranean, was commanded by Vice Admiral Bernhard H. Bieri, USN. The flagship, a destroyer tender anchored at Naples, did not operate with the Fleet. On 7 Aug 1947, however, the cruiser USS *Dayton* (CL 105) became the first postwar Mediterranean flagship actually to operate with the Fleet. A cruiser has been used as the Fleet flagship ever since.

IN JUNE 1948, the title of Commander Naval Forces, Mediterranean, was changed to Commander Sixth Task Fleet, and on 12 Feb 1950, it was simplified to Commander Sixth Fleet, its present-day title.

FRIENDLY FLEET—Sixth Fleet ships drop anchor in picturesque harbor at Rhodes, Greece, while their crews go ashore for look at Greek way of life.

Postwar commanders of the Fleet in the Mediterranean make up a distinguished roster. They include Vice Admirals Bieri, Forrest P. Sherman, John J. Ballentine, Matthias B. Gardner, John H. Cassady, Thomas S. Combs, Ralph A. Ofstie, Harry D. Felt, Charles R. Brown, and the present commander, Vice Admiral Clarence Ekstrom. The normal tour of duty as ComSixthFlt is one year.

The Sixth Fleet remains today as the fireman of the Mediterranean. Roaming that inland sea, it is constantly ready and able to do whatever called on to put out small "brush fires" or large "forest fires." Our friends along the Mediterranean feel more secure because of the United States Sixth Fleet.

—Erwin Sharp, JO1, USN.

ON DECK—Church services are held topside under cruiser's guns during break in training. When in port, church parties go ashore to attend local services.

Seventh Fleet: Ready,

THE UNITED STATES NAVY at the present time has four "numbered" Fleets—the *First, Second, Sixth* and *Seventh.*

These fleets provide the basic organization through which naval forces, with their associated air and Marine elements, may be moved rapidly to any spot necessary to safeguard the security of this country and the Free World.

Normally, a "numbered" Fleet might be considered the logical extension on a larger scale of the familiar "task force concept"—a naval force assigned to accomplish a specific task. The types and numbers of ships and other units assigned to a numbered Fleet are precisely adjusted to the particular task which the Fleet is called upon to accomplish. Ships not needed are not assigned, or are withdrawn to be used elsewhere. Thus, the size of a numbered Fleet on any day may vary, according to its tasks at the moment, from a handful of ships to a half-dozen or more task forces.

Normally, specific numbered Fleets are assigned to general geographic ocean areas, though obviously they may be rapidly shifted. (See centerspread, pages 32-33.)

At the present time, the *First* and *Seventh* Fleets operate generally to the west of the Continental United States, while the *Second* and *Sixth* Fleets operate to the eastward. This organization provides a high degree of flexibility to support the policies of our country and those of our allies in the Free World.

To know exactly where the numbered Fleets stand in the hierarchy of the Navy today, here's a mental organization chart:

In command of the operating forces of the United States is the titular Commander-in-Chief, the President. Under him comes the Secretary of Defense and beneath him the Chairman of the Joint Chiefs of Staff. Under him the Chief of Naval Operations directs the operating forces of the Navy. Beneath him are the Atlantic and Pacific Fleets. Under the Commander-in-Chief, U.S. Pacific Fleet are two "numbered" Fleets, the *First* and *Seventh.*

There is a separate chain of command from the Chief of Naval Operations which stretches down through the Commander-in-Chief, Pacific Fleet, to the type commanders. These commanders are responsible for separate classes of ships and units. There are, for instance, Commander Naval Air Force, Pacific; Commander Amphibious Force, Pacific; Commander Submarine

PACIFIC CRUISERMEN show teamwork during practice session at their guns.

Force, Pacific; and Commanding General, Fleet Marine Force, Pacific. These type commanders have administrative control over ships and units of the Pacific Fleet and at such times as they are not attached to one of the two numbered Fleets, they normally have operational control.

THE PACIFIC FLEET is responsible for the maintenance of our sea lanes in that vast area (85,000,000 square miles) from the Bering Sea, Alaska and the Aleutians through Japan, Ryukyus, Taiwan, the Philippines and the South China Sea to Malaya.

Responsible for offensive and defensive action, it also is charged with establishing and maintaining control of all essential lines of communication, keeping control of the sea and denying its use to the enemy.

Willing and Able

Described as a "balanced Fleet," it consists of about 460 ships, 3000 aircraft, 260,000 men and 70,000 Marines. The *First* Fleet and *Seventh* Fleet make up the operational task Fleets and consists of the following major units: nine attack carriers, three antisubmarine carriers, seven cruisers, 109 destroyers, 46 submarines, two Marine divisions, and 14 patrol squadrons.

This striking force is prepared:

- To act as a visible and ever present deterrent to aggression.
- In the event of a limited war, to react immediately to halt aggression and prevent its spread.
- In the event of a general war, to retaliate immediately with every means available to destroy the enemy's ability and willingness to wage war, and to maintain control of the seas for our use.

Since the *Seventh* Fleet is located in the forward area, the immediate burden of carrying out these three functions would most likely be thrown into its lap.

The *Seventh*, as well as the *First* Fleet, is really a task Fleet—which means that it does not have permanently assigned forces. These forces are assigned by CINCPACFLT as they are needed.

THE SEVENTH FLEET, for example, is divided into sub-task forces, a term coined by the Navy in the Pacific during World War II. This means the assignment of ships, aircraft, Marines or whatever else that is required to make up this sub-task force to accomplish one particular task. Type commanders feed their ships into this task organization for one certain job or for a specified length of time. In the case of the *Seventh* Fleet, ships are moved in and out on a regular rotating basis.

A small force of some interest is Task Force 72 which operates generally near Taiwan (Formosa). Its two squadrons of aircraft and four destroyers are responsible for the detection of any invasion of Taiwan.

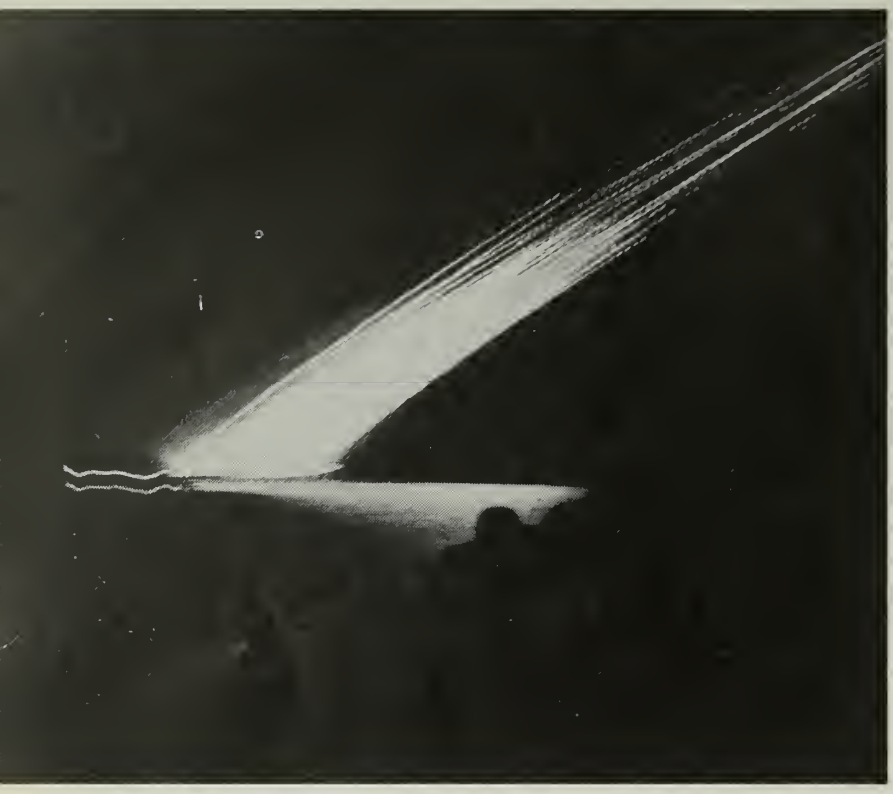
The *Seventh* Fleet is assigned the task of serving as a deterrent to aggression in the Far East and Western Pacific. It consists of (usually) four carriers, three cruisers, 36 destroyers, several patrol aircraft squadrons and approximately a squadron of submarines. Pacific Fleet ships generally operate along the lines of the Philippines, Taiwan, Okinawa and Japan in a constant state of readiness.

Commander Seventh Fleet is VADM Frederick N. Kivette, USN, who took over from VADM Wallace M. Beakley, USN, on 30 Sep 1958. The following comments demonstrate how the top echelon looks at the role of the Seventh Fleet, particularly in these times:

"Readiness has become a household term in the Seventh Fleet. It is a comprehensive word that denotes a condition, and we find its influence deeply interwoven in Seventh Fleet operations.

"Readiness means a different

SHIPS OF SEVENTH FLEET have a vast area of 85,000,000 square miles of Pacific waters to patrol and watch over.



SHOOTING THE WORKS—*USS Carronade* (IFS 1) lights up the sky as her 5-inch rockets streak toward target area during night practice session at sea.

thing to different people. Basically, it is achieved through gaining and applying sound basic knowledge—plus good equipment, acceptable skills, consistent training, sound planning and, above all, the proper state of mind of men.

"With world conditions as they are today, the need for readiness is obvious. There is no easy road or simple short cut to achieve a ready Fleet, ready ship, ready officer or ready sailor. It takes hard work, training, skillful planning, and most important, a healthy outlook in our minds and in our hearts. That's our job, and we'll do it from seaman to admiral and from the smallest minesweeper to the biggest flattop.

"The Seventh Fleet has to be ready to take on all assignments that are required to accomplish its mission, and be able to perform them at ANY time."

Today the Fleet is not operating under wartime hazards or wartime risks, but the psychological incentive that exists during wartime must be maintained. The Fleet is large, at the highest peacetime tempo in the nation's history, and operations are carried out with long lines of communication.

BASES ARE MAINTAINED in the Far East and Western Pacific for repairs of ships, for supplies, and for recreation of the men. The bases in Japan are located at Yokosuka and Sasebo, and at Subic in the Philippines. Airfields are maintained in Japan, Okinawa and the Philippines for patrol aircraft and accelerated training of carrier aircraft air groups. During wartime, and operating with wartime stimuli, the Fleet would not be tied to these bases but would be free to roam at will.

The *Seventh* Fleet consists of about one-third of the total units in the Pacific Fleet. From this it might be assumed that two-thirds of the Fleet operate back home. But this is not true. As ships are rotated back and forth between the *Seventh* Fleet and the West Coast there is considerable transit time involved. Even a fast carrier in a round trip takes about one month, a slow ship such as an LST would take about two months. So the carrier rotating two cycles each year

BLAST IT—*USS Kidd* (DD 661) churs up water in Far East as Pacific Fleet holds antisubmarine maneuvers.

spends two months out of that year for transit time. This time isn't necessarily lost; the ships are ready to go. But the effective operating tempo of the Fleet is a big item of concern.

Also, there is a conflict between the operating tempo and commitments to keep ships on station. In addition to transit time, there are other commitments, though relatively small, such as resupply off Point Barrow, the Deep Freeze expeditions in the Antarctic, the Bikini tests whenever they occur, and support of various scientific expeditions. There are many such tasks with the resultant effect that the Fleet operates or is consistently deployed from its home waters 50 per cent of the time.

PEOPLE ARE STILL the most important ingredient in a fighting force, so the operating tempo, which has a tremendous impact on the men, and hence, on the standards of the Pacific Fleet, is of concern as it affects the family life of naval personnel.

Every two years a destroyer, for example, goes into a shipyard for overhaul. During this period the ship takes on an almost entirely new crew and new equipment.

After the yard period, the ship goes to work in refresher training before going forward as an effective unit. Completing this, the destroyer goes to the Western Pacific for six to seven months for duty with the *Seventh* Fleet. Upon its return to the U.S. the ship spends a month in port to enable part of the crew to take leave, then the destroyer participates in training exercises off the West Coast. During this time the ship will again take on some new men and some new equipment.

SLEEK SHIPS like *USS John S. McCain* (DL 3) maintain state of readiness while operating along the lines of the Philippines, Taiwan, Okinawa, and Japan.

After the ship has completed the scheduled exercises and additional training it returns to the *Seventh* Fleet for another six-month tour, then again returns to the U.S. for the customary month of leave time for the crew and more exercises and more training.

The result of this cycle is that the destroyer has spent approximately five months in her home port in two years. The officers and men, while in port, still stand duties—

MISSILE MUSCLES—Pacific Fleet ships carry their share of guided missiles. Here, *USS Tunny* (SSG 282) fires *Regulus*.

ON THE GO—Supplies and fuel are highlined to Seventh Fleet task force while underway in Pacific Ocean.

about one in four, some one day out of every three—in addition to their normal working days.

Another factor affecting the operational tempo is the Fleet's readiness and the conflicts between being ready today, two months from now and 15 years from now. Readiness is a key word in sea operations.

IN VIEW OF POSTWAR developments in weapons, this same Fleet has the biggest striking power in history. The hub of this force—a group of aircraft carriers carrying hundreds of jet planes—must be ready at all times to turn in any direction.

Additional ships have recently been called upon to supplement its strength. Some of these include the carrier USS *Midway* (CVA 41) and the heavy cruiser *Los Angeles* (CA 135). Another carrier, *Essex* (CVA 9) and four destroyers, *Forrest Sherman* (DD 931), *Charles H. Roan* (DD 853), *Hale* (DD 642) and *Forrest Royal* (DD 872) were ordered to join the *Seventh* Fleet.

Maneuvers conducted by the *Seventh* Fleet are considered a matter of routine. One of these, "Exercise Knockout," for example, was conducted in June to test its general capabilities as well as its ability to control a limited war.

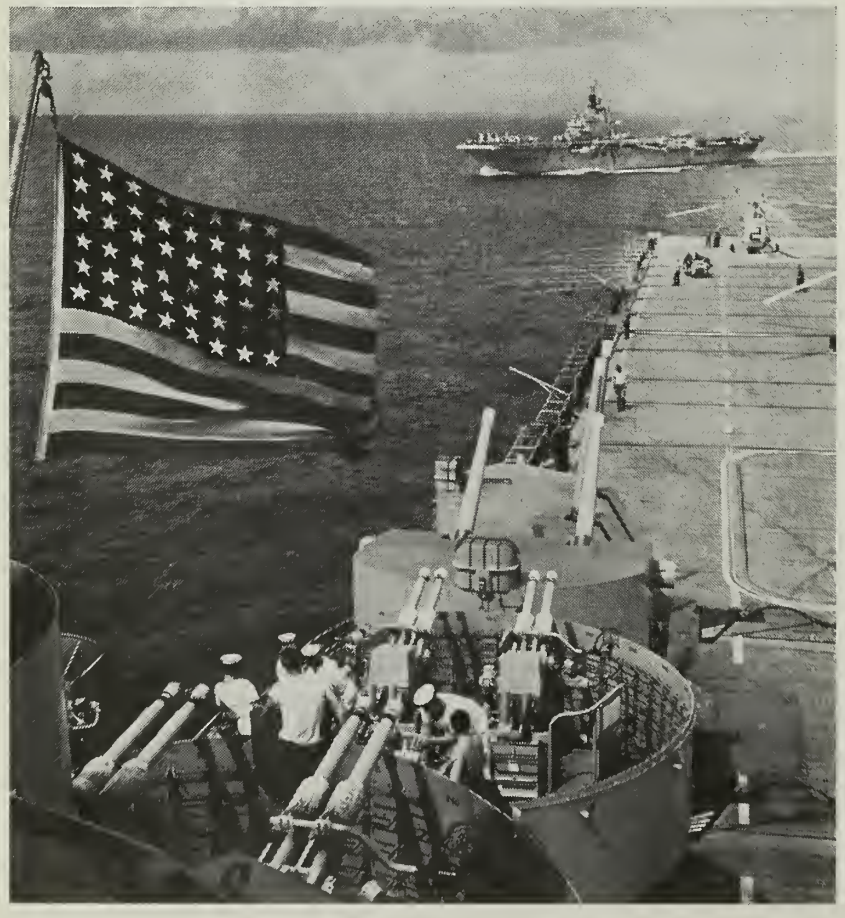
The six-day exercise was conducted in the Far East from the North Pacific to the South China Sea. It involved most of the ships of the *Seventh* Fleet, and several hundred aircraft. Other participating forces included units from the First Marine Air Wing, the Eighth Army and the Fifth Air Force.

The main forces, spearheaded by the attack aircraft carriers USS *Hornet* (CVA 12), *Hancock* (CVA 19) and *Shangri La* (CVA 38), also included an antisubmarine hunter-killer group, the Taiwan Patrol Force, logistic supply force, the destroyer force and an airborne early warning group.

The exercise demonstrated the ability of the *Seventh* Fleet to carry out any task it may be called upon to do in the Far East.

—Thomas Wholey, JOC, USN.

FRIENDLY GET-TOGETHER—British sailors from *HMS Bulwark* (across bow) compare notes with men of *USS Philippine Sea* (CVS 47) during operations.



Neither Rain, Nor Snow, Nor Typhoons Stop Seventh Fleet Band

Music and travel have been the by-words of the Seventh Fleet band which has just completed a tour of duty in the Western Pacific. During this tour, they played for more than 100,000 people in Japan, Okinawa, Thailand, South Viet-Nam, Taiwan and the Philippines.

The band left behind a list of credits that would make most stateside top-band press agents green with envy, and presented programs under conditions that would make the same band's program manager shudder.

At an evening performance on an Okinawan village playground, for example, 1500 children crowded onto the field. For light, the band relied on the headlights of a bus, and two 40-watt electric light bulbs strung overhead. All this while a typhoon bore down on the island.

Another time, in Bangkok, Thailand, they staged a concert on the grounds of the public zoo in front of the monkey pens.

On many occasions they played their version of the Japanese national anthem from the deck of a minesweeper in port. Once in Saigon, South Viet-Nam, the band was asked to produce just such a piece of music. The flagship was to make a port call there, and the South Viet-Nam national anthem was not part of the band's repertoire. The band asked for a copy of the music. While the ship was winding its way up the Makong River toward the capital city, a piano score was brought aboard. Bandleader Ned Muffley, MU1, and one of his musicians, sat down and wrote out a score for the band. When the ship arrived in port, all hands were ready. The president and local city officials expressed their pleasure that the band was so "familiar" with their music.

The band played every type music from classical to Dixieland jazz. For this, they had to practice. Sometimes that was not easy. Once, on the deck of a heavy cruiser, the band was practicing when the ship conducted General Quarters drill. The booming five- and eight-inch guns gave the brass plenty of competition.

From city to city and from country to country the band hopped. And wherever they played the response was the same; always a tribute to the fine music produced by the Navy's Seventh Fleet band.

During a two-week tour of Japan's Inland Sea ports, about 58,000 people turned out in 10 cities to hear them play. At Wakayama, 2400 persons came to a performance at a hall that seated only 1200, and at the Shunko-Gakuen Orphanage at Koyabe, Yokosuka, Japan, the band played for a large group of orphan children.

The band staged two concerts in Taipei, Taiwan, in April 1958. They played to 1500 persons at the Taipei City Hall and to another 7500 on an indoor basketball court at the Armed Forces Stadium there. Following this, they played at the International Trade Fair in Osaka, Japan, and at the Ayameika Gardens in Nara, near Osaka, where they filled the Grand Amphitheatre twice.

Independence Day was spent in Thailand. In addition to playing for the American community there, 300 citizens of Thailand came to the National Stadium to hear the band's music.

Live performances were not the only ones in which the Seventh Fleet band participated. During a three-day stay in Manila, they did an hour-long radio broadcast with song-stylist Naty Munoz.

In Sasebo, Japan's largest radio network, Nippon Hoso Kyokai, recorded portions of a concert for use by their network. Later, during the tour of Inland Sea ports, the network was on hand at every stop to make live broadcasts and recordings.

In Saigon, South Viet-Nam, the band played in the street adjacent to the president's government building at the personal request of the president. An extensive public address system was hooked up, and the music drew spectators from all quarters of the city.

There was also routine. There was music at morning quarters, at official COMSEVENTHFLT receptions, "jam" sessions aboard ship, background music during meals, and music during refueling operations.

Music was the specialty of every man in the band. When the members of the band completed their tour of sea duty, they were ordered to duty, not as a group, but as members of Navy bands located at various naval bases in the States. Commander Seventh Fleet has a new band now, which was organized at the U. S. Naval School of Music in Washington, D. C.

SAILING SEVENTH FLEET Band recently completed tour of Western Pacific. Its wide variety of music entertained many people in the ports visited.

LETTERS TO THE EDITOR

This section is open to unofficial communications from within the naval service on matters of general interest. However, it is not intended to conflict in any way with Navy regulations regarding the forwarding of official mail through channels, nor is it to substitute for the policy of obtaining information from local commands in all possible instances. Do not send postage or return envelopes. Sign full name and address. Address letter to Editor, ALL HANDS, Room 1809, Bureau of Naval Personnel, Navy Dept., Washington 25, D. C.

Oil Burner

SIR: The September 1958 issue of ALL HANDS contains an excellent article regarding USS *Pennsylvania* (BB 38) which brought a thrill to us who served in this gallant ship. But I question the allegation that she was kept from being a member of the Grand Fleet in 1917 because she was not a coal-burning vessel.

I vividly recall that, as a new fireman third class in 1933, the older men never tired of telling me: "You got it soft; you should have been here last year when we passed coal." Can you set me straight?—John Burrill, CAPT, SC, USN.

• Pennsylvania, *commissioned 12 Dec 1916, was an oil-burner—not a coal burner.*

The Report of the Secretary of the Navy to the President dated 1 Dec 1916 says: "In 1913 the Navy definitely adopted the policy of building oil-burning vessels only."

Also contained in the same report under the section for Bureau of Steam Engineering was this statement: "The most notable additions to the Fleet during this year (1916) were Nevada, Oklahoma, *and* Pennsylvania, *the first of our oil-burning battleships. The trials of these ships were satisfactorily completed and all have joined the Fleet."*

It's possible that you were being initiated into the "Bring back a bucket of steam," or "Make sure you check with Charlie Noble," phase of your Navy career. When the old timers said, ". . . you should have been here last year . . .", it may have been more or less in the same category as the fisherman who says, "You should have been here last week. Brother, were they biting then!" Of course, while you're with him, you never get a nibble.—ED.

Wins in a Walk

SIR: I feel that, without much exertion on my part, I may have set some sort of record.

In April 1956 I was transferred to Davisville, R. I., for a normal tour of shore duty with Staff, Commander Naval Construction Battalions, U. S. Atlantic Fleet.

In the three years since then, I have had six permanent changes of station with no travel involved (and no possibility of drawing dislocation allowance).

Although four of these transfers resulted from redesignations of command, orders were still written on a permanent change of station basis so that a personnel diary could be inaugurated.

Here, in chronological order, is what happened:

26 Apr 1956—Arrived for duty Staff, COMCBLANT, Davisville, R. I.

July 1956—Transferred to USN MCB Special (Rear Echelon).

About Aug 1956—Transferred to USN MCB Special, Detachment Bravo.

About Feb 1957—Transferred to Antarctic Support Unit Three.

About Mar 1957—Transferred to Antarctic Support Activities.

12 Mar 1958—Transferred to USN MCB Six, Davisville.

Feb 1959—According to orders I have already received, I will next be transferred to Commander AGR Division 21.

Four of these transfers did not even involve leaving the office.—R.G., YN2, USN.

• *Offhand, we can't say for sure that you've got yourself a record.*

However, since yours seems to be the first record of this category in our files, it looks as if you've got the title, until a new champ comes along.—ED.

First Endorsement

SIR: Although I'm sure the answer to my question was answered by ALL HANDS several years ago, I have been unable to find that particular issue of the magazine.

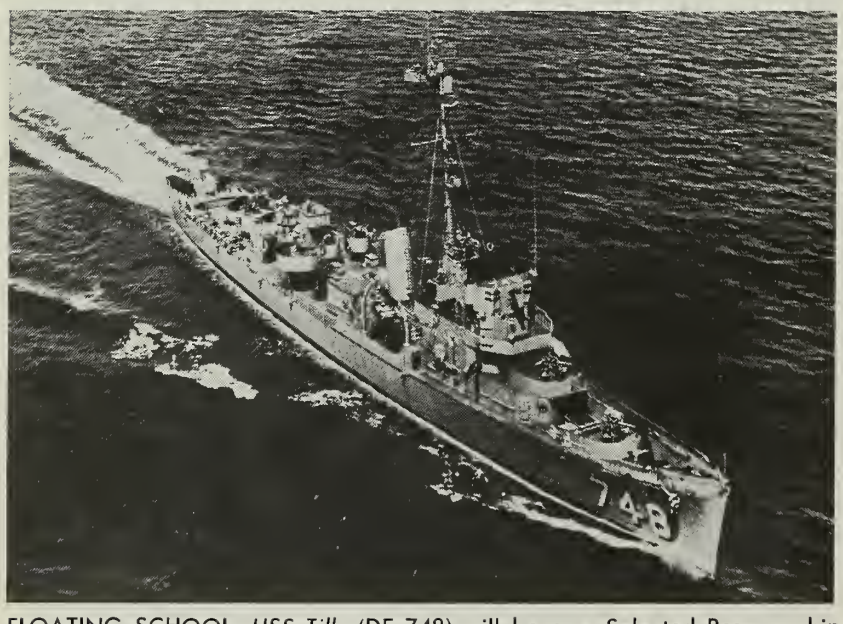
Is it correct that when a person within a command originates official correspondence in the usual Navy letter form, such as a request, he should use the regular letterhead stationery of the command for the first page of the original.

The first endorsement, by his commanding officer (commander, officer-in-charge), will then be without letterhead, as normally prescribed.

The Navy Correspondence Manual does not seem to be specific on this point. Will you clarify this point for me?—P.J.R., LCDR, USN.

• *The item in question appeared in the April 1955 edition of* ALL HANDS. *It explained that Navymen, writing to the Chief of Naval Personnel, via their commanding officer, are engaged in official correspondence. Letterhead is used for the first page of official correspondence.*

You're also right, as it points out in the Navy Correspondence Manual, that the first endorsement on official correspondence by the CO is without letterhead, if on a separate sheet.—ED.



FLOATING SCHOOL—*USS Tills* (DE 748) will become Selected Reserve ship for Portland, Me. Her past duties included Reserve training for Sixth ND.

Big 'M' Gets Around

SIR: Our ship has been in the Mediterranean for nine months now—three of it on an extension—and during that time we have faithfully read every edition of ALL HANDS.

We have yet to find one article concerning our ship, USS *Mercury* (AKS 20). Our ship is not new and it doesn't have a lot of new equipment; but with the equipment we do have, we seem to get the job done quickly, efficiently, and on time.

It seems to us that other cargo ships with their cargo handling battalions, deck elevators, new booms and winches, fork lifts and numerous other aids get all the recognition. The old, big "M" gets nothing.

In your August issue, when you mentioned SERVLANT ships that have given to the Navy-Marine Memorial Fund, *Mercury's* name was not listed. True, we only gave $317.25; but the average was good since we only have 192 men aboard.

Do you call this a fair shake?—M.R., QM3, USN, and J.V., QMSN, USN.

• *True, your ship was not mentioned as having donated to the Navy-Marine Memorial Fund, and also true that you haven't been getting space in* ALL HANDS.

But if our staff tried to go from ship to ship throughout the entire Navy to gather news, you wouldn't have seen nine issues in nine months. For news of individual ships we have to depend for the most part on persons like yourself to get the news and send it to us.

So before you complain to us about not using stories about your ship, see your Public Information Officer and ask him how many news stories have been sent to us.

After receiving your letter, we did take a look at Mercury's *history, and, we agree, she does deserve recognition. Maybe the following record will help you hold up your head when you are compared with some of the newer AKS-type ships.*

Mercury *was constructed at Kearny, N. J., in 1939 as the* SS Mormactern. *Taken over by the Navy on 20 Jun 1941, she was designated as an auxiliary cargo ship and renamed* Mercury *for the planet of the same name. She received her Navy commission on 1 Jul 1942. During that same month,* Mercury *sailed on her first supply mission. She carried 8135 tons of mixed cargo, which included drummed petroleum products and dynamite to Tongatabu Harbor, Pago Pago, and Efate Island. While anchored off Efate Island, she experienced her first real General Quarters alert.*

After a brief refueling stop at Suva Harbor, Mercury *returned to San Francisco. Twenty days later she sailed, unescorted, for Auckland, N. Z. She arrived on 5 November after weathering a two-day storm, unloaded most of her cargo, and then took on additional submarine equipment for transportation to Guadalcanal.*

HARD WORKING *USS Mercury* (AKS 20) has carried the goods for Navy since 1942. In WW II she kept supplies coming through thick of Pacific combat.

While unloading at Guadalcanal, she was so hampered by constant air raids, that she shifted to Tulagi harbor evenings for better protection. She returned to Noumea, made another run to Efate, then sailed to San Francisco.

After a brief period of availability, Mercury *left on 17 Mar 1943 for her third voyage. She unloaded cargo at Espiritu Santo, Noumea, and Guadalcanal, and again returned to San Francisco.*

During the remainder of 1943, Mercury *made two more voyages to the South Pacific. On 7 Jan 1944, she received orders to Pearl Harbor to become a part of the Fifth Amphibious Force.*

At Honolulu she loaded troops and equipment. On 20 January she sailed for the Marshall Islands and entered Kwajalein atoll 11 days later. She was just in time to witness the bombardment and initial assault on the island. Except for a small amount of ordnance off-loaded, the cargo remained intact, and Mercury *remained with the assault force which sailed for Eniwetok atoll on February 4. Her main cargo was finally discharged by landing craft during the attacks on Eniwetok, and Barry Islands. On 18 Feb 1944 she sailed for Kwajalein to embark a detachment of Marines for transportation to Pearl Harbor. After this she sailed for San Francisco.*

There was no rest for the big "M," however. Both yard availability and loading were completed by 15 April. That same day she again sailed for Pearl Harbor with a 7800-ton cargo which included two deck-loaded pursuit planes. Her cargo was unloaded at Pearl Harbor, West Loch Depot, Honolulu, and Kauai Island.

The empty ship returned to Pearl Harbor on 9 May to await the formation of the Saipan invasion group. On the 28th, Mercury *moved to Honolulu to embark units of Army Aviation Engineers with their equipment. On 7 Jun 1944, she sortied with a task group en route to Saipan via Eniwetok. The 3500-mile trip was punctuated by frequent submarine alerts, but the task group reached Saipan safely on the 26th.*

Since the day she was commissioned, Mercury *had courted disaster in every voyage she made, loaded as she was with highly dangerous supplies. The laws of probability finally caught up with her in Saipan, but even then, she was loaded with luck.*

Mercury *anchored off Saipan just south of Garapan and all hands had secured from General Quarters. The entire area was covered with a smoke screen.*

Souvenir Books

In this section ALL HANDS prints notices from ships and stations which are publishing souvenir records and wish to advise personnel formerly attached. Notices should be directed through channels to the Chief of Naval Personnel (Attn Editor, ALL HANDS) and should include approximate publication date, address of ship or station, price per copy and whether money is required with the order.

Mobile Construction Battalion ONE has published a cruise book covering the Roosevelt Roads and Detachment November deployments of 1957, Davisville deployment of 1958, and the Guantanamo Bay and Detachment Papa deployment of 1958. If you are interested in obtaining this cruise book, you may write to the Editor, Cruise Book, *MCB One*, c/o Fleet Post Office, New York, N. Y. The cost is $6, and payment should be made by postal money order.

Ship Reunions

News of reunions of ships and organizations will be carried in this column from time to time. In planning a reunion, best results will be obtained by notifying the Editor, ALL HANDS Magazine, Room 1809, Bureau of Naval Personnel, Navy Department, Washington 25, D. C., four months in advance.

• USS *Arizona* (BB 39)—The third annual reunion will be held at the Jack Kennedy Center, Naval Base, Terminal Island, Long Beach, Calif., on 18 April. For further information, write to Joe Keehan, 811 Locust Ave., Long Beach 13, Calif.

• *Base Force, Long Beach, Calif.*—Former crew members of those Base Force ships that were based at San Pedro, Calif., from 1935 through 1941 will hold a reunion in June at the Jack Kennedy Center, Naval Base, Terminal Island, Long Beach, Calif. For details, write to W. E. Larsen, 4019 West 176th St., Torrance, Calif.

• USS *Helena* (CL 50)—A reunion will be held on 1, 2 and 3 August at the Edgewater Beach Hotel, Chicago, Ill. For more information, write to Joe Cannone, 2450 South 19th St., Omaha 8, Nebr.

• *38th Seabees*—The first reunion of World War II members of the 38th Seabees will be held at the Commodore Perry Hotel, Cleveland, Ohio, on 11 and 12 August. Write to George A. Green, 1926 Standard Building, Cleveland 13, Ohio, for more details.

• USS *LST 339*—All who served in *LST 339* and who are interested in attending the third annual reunion to be held in Minneapolis, Minn., next summer may write to George Mohn, 3957 — 36th Ave. South, Minneapolis, Minn., for additional details.

• USS *Navasota* (AO 106)—All crew members who served from 1953 to 1956, who are interested in holding a reunion with time and place to be decided, may write to Robert K. Bauer, 541 West Kelso St., Inglewood, Calif.

• USS *Tappahannock* (AO 43)—Those who served from 1952 until decommissioning in 1954 and who are interested in holding a reunion may write to Boyd C. Johnson, Jr., 603 Petersburg Pike, Richmond, Va.

Suddenly at 2130 the roar of a plane's engines was heard off the port bow. Three minutes later a twin-engined Japanese bomber broke through the smoke at 200 yards. It was flying at about 90 feet and headed straight for the ship's superstructure. The plane released an aerial torpedo. It did not hit the water, but struck the ship unarmed. Attempting to gain altitude, the plane passed clear of the stack, but only to strike the big starboard cargo boom, and spin into the water about 1000 yards off the starboard quarter.

The torpedo passed through the compartments on the port side of the deck house, tore open the warhead and air flask, and scattered TNT over the bridge and after section of the ship.

The afterbody of the torpedo tore into the deck house, killing the chief commissary steward, and lodged in the first lieutenant's room. The detonator lodged aft of the boilers in the engineroom. A large portion of the crew was covered with the explosive compound. There were 11 casualties.

After temporary repairs were made, she headed for Pearl Harbor via Eniwetok. Mercury *remained at Pearl from 17 July to 8 Aug 1944 undergoing repairs. On the 30th she moved into Honolulu harbor to begin loading operations for the forthcoming Leyte assault. Tons of ammunition and fresh provisions were taken aboard, and after a brief return to Pearl Harbor on 6 September to embark troops,* Mercury *sailed for Eniwetok. On 3 Oct 1944 she dropped anchor off Manus Island in the Admiralty group. On the 14th, after supplying ships in her company, she sailed for the invasion of Leyte Island.*

She arrived off Dulag Beach on 20 Oct 1944. During the next three days and nights of unloading, she was subjected to frequent air attacks. By the 23rd Mercury *had completed her mission.*

Next came Humboldt Bay and Noemfoor Island before she left for another run to Leyte Island. She anchored off Catmonn Hill on the morning of 18 Nov 1944 during a heavy air raid. Eight and one half hours later she had discharged her 850 tons of cargo and was returning to Humboldt Bay.

From there she was directed to Morotai Island to embark units of the 340th Combat Engineers for the impending Lingayen attack. This operation was postponed, however, and the loading was delayed until late December. During the ship's stay at Morotai she was subjected to 46 separate enemy air attacks.

On 28 Dec 1944, Mercury *sortied with her task group at Sansapor and two days later was underway for Lingayen Gulf. Air opposition was heavy as the convoy approached its destination and once the group was anchored, a picket boat patrolled the area to guard against swimmers carrying explosives.* Mercury *began to discharge her cargo on 9 Jan 1945, and on the 11th sailed for Leyte.*

Her next mission was to land an Army division at San Antonio, Luzon, in an effort to cut off a Japanese retreat to the Bataan Peninsula. This was accomplished on 31 Jan 1945, after which Mercury *sailed for Ulithi via Leyte.*

Emergency alterations were made at Ulithi to outfit the ship for the transfer of cargo at sea. Replenishment of large fast task groups of the Fleet with regard to fuel and ammunition had proved successful; but as yet no fully loaded provisions ship had successfully transferred on a large scale while underway. From 22 March until 16 May, Mercury *steamed with Service Squadron Six, replenishing the fast carrier groups of Task Force 58 off Okinawa. While steaming these 13,500 miles at an average speed of 10 knots,* Mercury *played an important role in keeping the Fleet close to the Japanese homeland.*

After returning to Ulithi, she was dispatched to Pearl Harbor for minor repairs, and later ordered to San Francisco, Calif., for conversion to a general stores issue ship. On 31 Jul 1945 her designation was changed from AK 42 to AKS 20.

When the war ended, Mercury *was transferred to active duty with the Atlantic Fleet, where she has continued to operate until the present date.*

Mercury *has an impressive war record. She earned five battle stars for her participation in operations at the Marshall Islands, Marianas, Leyte, Okinawa and Manila Bay.*

There's proof that "The old, big 'M'" does get the job done. Keep up the good work, and bring us up to date; we always have room for news. We don't always have the stories of ships at our fingertips as we did on Mercury. *We depend a great deal on people like you to keep us informed. Many thanks for your fine letter. And, yes, you and your shipmates in* Mercury *did a fine job of helping along with the fund for the Navy-Marine Corps Memorial Stadium.*—ED.

Travel Allowance

SIR: Recently two enlisted men attached to this Base were sent on TAD. The nature of the duty was such that travel via privately owned vehicle, at the rate of seven cents a mile, was authorized for the owner of the automobile. The second set of orders contained the following statement: "Authorized to travel as a passenger in a privately owned vehicle at the rate of five cents a mile."

When they returned, the one member was paid his seven cents a mile plus per diem. The second man, however, was paid per diem, but no mileage.

Our disbursing officer said that, since the first man was paid seven cents a mile to drive his own car, the government was in fact providing transportation for the second man.

Since the second man was not actually directed in the orders to travel with

the first man, I think he was entitled to receive mileage at the rate authorized in his orders. What's the story?—F. W., YNCA(SS), USN.

• *If our understanding of the situation is correct, you're right and the second man is entitled to his five cents a mile. The fact that the two men traveled in the same privately owned vehicle has no bearing on the case. Both men were authorized to travel at their own expense and both must be paid. Comptroller General Division B-116080 of 6 Nov 1953 confirms this.*

Section 303(a) of the Career Compensation Act of 1949, has something to say about it. This act provides that members of the uniformed services shall be entitled to receive travel and transportation allowances for travel performed under competent orders when away from their designated duty station. This allowance is payable "without regard to the comparative costs of various modes of transportation."

"Joint Travel Regulations" states specifically that a monetary allowance of five cents a mile shall be paid in place of transportation when a person travels at his own expense. The only exception to this is when authorized seven cents a mile to travel in a privately owned vehicle when it is more advantageous to the government.—ED.

Retainer Pay

SIR: I read with great interest the information contained in a box entitled "Fleet Reserve Pay" on page 55 of the July issue of ALL HANDS. I would like to say, however, that the information, although true, is misleading.

Although pay for 19 years, 6 months, and 10 days pays the same as 20 years' service as you stated, so does 19 years, 6 months, and 00 days.

It would indicate that it is necessary to serve 20½ years to get an increase over 19½ years' service. Actually service of 20 years, 00 months and 01 day would result in a larger retainer check. With the passage of the last amendment to the Career Compensation Act of 1949, there is an increase in longevity for over 20 years' service and retainer pay is based on the rate of pay at the time of separation.—D.E.C., PNC, USN.

• *Well . . . yes and no. We're right . . . and then again, you're right. You're right in saying that 19 years and 6 months counts the same for retainer pay purposes as 19 years, 6 months, and 10 days. We suggest, however, that the extra 10 days be served to insure that there hasn't been a day or so lost somewhere along the line that you haven't counted when computing time served.*

As for the indication that you would have to serve 20½ years to get an increase over 19½ years service; that's what we intended, and it's the straight scoop. Nineteen years and six months counts as "over 20" for retainer pay purposes. You would gain nothing except experience by serving 20 years and one day. It's still just "over 20" so far as your retainer pay goes. You would have to do 20½ years to get credit for "over 21" before the amount of your retainer check would increase. And even then the basic pay is the same, you just have one more year to count at 2½ per cent.

The figures contained in the box to which you refer are correct.—ED.

TWO FOR TOW—Crew members of USS Cocopa (ATF 101) keep eye on wire rope secured to auxiliary tug USS Sunnadin (ATA 197) during towing session.

One Ship Made Up the Whole Fleet in the Med, in Days

SIR: The Sixth Fleet in the Mediterranean makes news so often nowadays that it has brought back memories for me of duty in that area before World War 1. In case some of your readers might be interested in such reminiscences, here is my account of what it was like in the Med "way back when."

It was November 1912. A war was in progress between the Balkan States and Turkey. To protect American interests it was decided that reinforcements were needed for our Mediterranean "Fleet," which then consisted of one converted yacht—USS *Scorpion*.

This representative of our Navy's fighting strength had a displacement of 775 tons, a crew of seven officers and 80 enlisted men, 2800 shaft horsepower and nothing in her armament as big as a four-inch gun. Normally she was moored in the harbor at Constantinople, her crew enjoying life in that gay city.

The ships selected to bolster this "Fleet" were USS *Tennessee* and *Montana*—big, fast, hard-hitting ships for their time. Both were attached to the Reserve Fleet and lying in the back channel at League Island Navy Yard, Philadelphia, Pa., at the time. To provide crews for these ships the COs of the battleships USS *New Jersey* and *Louisiana* were given emergency orders to furnish enough men to fill the ships' quotas.

New Jersey, at the Boston Navy Yard when the orders came, had her draft on the dock and underway in less than 24 hours, calling men back from liberty and leave in order to fill her assignment. We moved out of South Station in Boston late at night on a Navy Special and high-balled it through to Philadelphia in record time.

At the Navy Yard working parties were moving stores aboard *Montana* dockside and loading coal from canal boats on the channel side. Deck winches groaned. Coal bags rose and fell. Cargo nets swung between dock and ship. Below decks, snipes (coal passers) stowed the dusty fuel in the far corners of the ship's bunkers while seamen put dry stores, marine supplies and ammunition in store rooms and magazines.

When our baggage arrived we donned working uniforms and turned to. We didn't stop until late that night when the last bag of coal was whipped aboard. Some 2400 tons of the stuff were stowed below.

In November 1912, *Tennessee* eased out into the channel and headed for the Delaware River, *Montana* slipped her moorings and fell in astern. Where we were headed we didn't know, but 10 days later we found ourselves in Gibraltar. Before we had properly secured to a buoy, coal barges (converted schooners) were eased alongside and we started to coal ship. At nightfall the flow of coal coming aboard started to slow down, so crew members joined the loading operation. Welsh dust and lumps began to move fast.

In the morning, without taking time to scrub her blackened sides, *Montana* headed east again. *Tennessee* remained at the "Rock." This time we learned our ultimate destination was Beirut, Lebanon (then under Turkish control). *Tennessee* would sail later for Smyrna.

One of our stops was at the little port of Alexandretta (in Turkish, "Iskenderun"), Turkey, where we anchored near a German light cruiser. The chiefs and POIs got liberty; the rest of us sweated it out on board.

In the morning *Montana* pulled up anchor and sailed for Adana, Turkey, then Tripoli, Lebanon. The chiefs were given liberty in both places. We stayed on board again.

At our next port of call we could see a long breakwater and a harbor full of ships. White-walled buildings with red-tiled roofs dotted the green hills that faded away into mountains above the city. Minarets penetrated the skyline.

This was Beirut, Lebanon. We anchored outside the breakwater. In the same roadstead were a French heavy cruiser, a British heavy—HMS *Black Prince*—and the German light cruiser we had seen at Alexandretta.

Our stay in Beirut was typical of those touchy pre-World War 1 international situations where the warships of several nations pulled into a possible trouble spot and sat around eyeing each other suspiciously until the tension died down.

During this period of watchful waiting we saw quite a bit of the city. We drank heavy black coffee and ate supersweet pastries in Turkish coffee shops. We bought souvenirs in Syrian and Lebanese bazaars. We rented Arabian horses and rode up the winding dirt roads into the hills. In short, we did most of the things that Navymen do in a foreign port.

The ancient city was part of the Ottoman Empire, but there were signs of French influence in the administration of local affairs. Camel caravans or manpower solved most of the local transportation problems, although there was a small railroad which worked its way through the mountains to Ba'albek and Damascus. A few open trolley cars circled the city and operated as far as the American College. In those days there were no autos or air traffic.

HELPING HANDS — *USS Tennessee* went to Med to bolster 'Fleet' strength when trouble started brewing in 1912.

Beirut's cosmopolitan population fascinated us. In this crossroads city, people of almost every race and nationality could be seen in the crowds that continually milled through the narrow streets and market places. Money changers occupied strategic corners. Muezzins called the faithful to prayer from their lofty minarets before sunset every day. This was the Beirut (or Beyrouth) we saw in 1912 and '13 during *Montana's* stay.

The ship sailed as far south as Port Said, Egypt, where we usually coaled and took on beef. On one trip we also stopped at Haifa, Palestine (now Israel), and Sidon (now Saida), Lebanon. After each cruise we returned to our old anchorage at Beirut.

Our orders to return home came as unexpectedly as had our orders to the Middle East. In June 1913, with just about 24-hours' notice, we heaved round on the anchor windlass for the last time in Beirut Harbor and threaded our way through the bumboats. We were homeward bound.

Tennessee had left the Middle East earlier. So, with our departure, the Mediterranean "Fleet" was again reduced to a single ship—*Scorpion*.—R. R. Myers, EMC, USN (Ret).

• *As we read your account of the Navy in the Mediterranean not too long ago, we couldn't help but wonder about* Scorpion. *Where did she come from, what was she doing in Turkey, and what happened to her?*

As we do so often, we passed the query on to those better qualified to answer than we are. It seems that Scorpion *had a long and honorable career and, if we hadn't heard of her, we should have.*

Adding to the information about her that you gave us, here's what we learned: A 775-ton steam yacht built in New York in 1896, she was originally known as Sovereign. *She was changed to* Scorpion *when the Navy bought her two years later, just in time for the Spanish-American war. She was 202.9 feet long, had a beam of 28 feet and, at the time of her commissioning, carried the formidable armament of four six-pounders.*

Her Spanish-American war experience was brief but brisk. Commissioned in April 1898, she was sent to join the blockading squadron of Santiago. While on that duty she assisted the Army in landings at Sigua, Daiquiri and Siboney.

Detached on 29 June she, in company with USS Osceola, *two days later attacked Spanish gunboats in the harbor of Manzanillo. Again during July she participated in the attack which resulted in the destruction of all the Spanish shipping at Manzanillo and the closing of the port. It is understandable that she should have been "highly commended for the very active part she played in the Spanish-American war."*

After a tour of special duty with the North Atlantic squadron, she was ordered to Constantinople as station ship in 1908. In the same tradition as the Sixth Fleet of today at the time of the earthquake at Messina, Sicily, in 1909, she was rushed from Constantinople to aid in relief work.

Montana *and* Tennessee *departed in 1913, but* Scorpion *stayed on.*

When Turkey entered the war, Scorpion *was moored in the harbor of Constantinople just off the Arsenal quay. In direct line of fire from the Turkish forts, it was not a comfortable spot. Eventually, she was assigned a berth in the Golden Horn.*

In 1917, a short time after a great explosion at Haidar Pasha she was interned for the duration of the war. The crew did what they could to further the relief work in Constantinople.

Scorpion *remained at Constantinople after the war and served as flagship of RADM Bristol while he was high commissioner to Turkey. She was detached and left for the United States 15 Jun 1927, concluding a 19-year tour.*

She was placed out of commission in October and stricken from the Navy List two years later.

We thank you for your interesting report on the old days in the Med, and recollections of the one-ship Fleet. Scorpion *must have been quite a gal. Anybody know anything more about her? If so we'd like to hear it.*—ED.

ONE SHIP FLEET — *USS Scorpion* was only ship in the U. S. Navy's Mediterranean 'Fleet' in 1912. The converted yacht served a 19-year tour in the Med.

ME TOO — *USS Montana* also steamed across Atlantic to join *USS Scorpion*.

Forces That Make Up the Fleets—

They're a Good Group

ONE OF THE BASIC ASPECTS of our national defense is the existence of large ocean areas around us which—if adequately protected—can serve to deter attack. That's why we have the concept of mobile Fleet forces—versatile, powerful and capable of moving far and fast.

The Fleets aid in keeping the world's sea lanes free, not just for ourselves but for all the nations of the free world. To be in position to protect these sea lanes, carry out U. S. policy, and fulfill U. S. commitments for these areas, as well as prevent attacks, our power is projected and sustained overseas to help maintain the peace and prevent or defeat aggression against our country and our Allies.

Proper disposition of naval forces permits us, in peace and in threat of war, to support our Allies, supply and support the Army and Air Force, support our overseas bases, and insure access to vital food and raw materials.

The centerspread (pages 32-33) in this issue of ALL HANDS will give you some idea how the Fleets are deployed and where the Type Commanders—the "feeders" of ships, men and supplies into these Fleets—are located.

Here is a very brief run-down on each.

• CINCPACFLT—*(Commander-in-Chief, U. S. Pacific Fleet).* Has headquarters at Pearl Harbor. The Pacific Fleet is responsible for the vast sea area of the Pacific and is prepared to maintain all essential sea lines of communication. In a period of conflict it acts to keep control of the sea areas for the United States and its Allies and deny this use to any enemy.

• CINCLANTFLT—*(Commander-in-Chief, U. S. Atlantic Fleet).* Headquarters are located at Norfolk, Va. The U. S. Atlantic Fleet operates out of several ports along the East Coast. The port of Norfolk is typical of these and is one of the biggest military installations in the world. The major commands of the Atlantic Fleet are centered here. The job of CINCLANTFLT in the Atlantic is the same as that of CINCPACFLT in the Pacific.

• CINCNELM—(This is the short title for *Commander-in-Chief, U. S. Naval Forces, Eastern Atlantic and Mediterranean*). The name is long, and so is the command. Its forces cover a lot of geography; roaming from Britain to the Indian Ocean. Headquarters are at 20 Grosvenor Square, London. CINCNELM directs the operations of U. S. Naval Forces in the Eastern Atlantic, in the Mediterranean and, as directed, in the Middle East waters.

• DESLANT—*(Destroyer Force Atlantic).* Headquarters of this world's largest afloat command of naval warships is at Newport, R. I. Some of its 200 ships and 50,000 men are just as likely to show up at the North or South Pole as they are to be seen in parts of the Persian Gulf.

• CRULANT—*(Cruiser Force Atlantic).* Headquarters at Norfolk, Va. The ships of this command serve as raiders, anti-raiders, antiaircraft defense for the carrier forces, convoy escorts and as naval gunfire support ships for amphibious landings.

• CRUDESPAC—*(Cruiser-Destroyer Force Pacific).* This is one of the largest commands afloat, consisting of some 160 ships encompassing 10 different types and over 40,000 officers and men. The ships operate from the west coast of the U. S. across the Pacific to Asia and from Australia northward to Alaska. The headquarters for this far flung organization is a San Diego-based destroyer tender.

• SUBPAC—*(Submarine Force Pacific).* The headquarters of this undersea command is at Pearl Harbor. The over-all operation, training, evaluation and development of all submarines in the Pacific come under this Type Command. SUBPAC is prepared to conduct submarine operations in the Pacific area in the event of actions threatening the security of the U. S. In coordination with other type and task forces, SUBPAC conducts specialized training of troop-carrying submarines used by the Pacific Fleet's Amphibious and Fleet Marine Forces; radar picket submarines are used as an early warning and lifeguard of our fast carrier task forces.

• SUBLANT—*(Submarine Force Atlantic).* This type command, located at New London, Conn., performs the same functions as its counterpart in the Pacific.

• PHIBLANT—*(Amphibious Force Atlantic).* Headquarters are located at Little Creek, Va. It has a basic job of training men in the many facets of amphibious operations.

• PHIBPAC—*(Amphibious Force Pacific).* Headquarters are located at Coronado, Calif. It has the same functions in the Pacific as its counterpart PHIBLANT.

• MIDEASTFOR—*(Middle East Force).* It is usually made up of one seaplane tender and two destroyer-type ships, and operates in the area of the Persian Gulf and the Gulf of Oman and the Red Sea.

• ASDEFOR—*(Antisubmarine Defense Force Atlantic).* Based at Norfolk, Va. There is no other command quite like it. It was established in June 1957 in an effort to provide better defense against enemy submarines as well as to perform certain other duties in connection with the Fleet's mission of defending the U. S. from attack through the Atlantic Ocean Area. This includes the *Atlantic Barrier Command*—the dual-purpose seaward extension into the Atlantic of the continental early warning radar lines by electronic-packed ships and aircraft.

• BARPAC—*(Barrier Command Pacific).* Headquarters at Barbers Point, Oahu. It's made up of a wing of flying radar sentinels (Super Constellations), together with the surface radar pickets of Destroyer Escort Squadron Seven. These forces shoulder the early warning burden in the mid-Pacific. The Barrier became fully operational on 1 Jul 1958 when an intricate chain of radar defenses went on watch 24 hours a day, seven days a week.

• COMSOLANT—*(Commander South Atlantic Force).* Based at Trindad. This command was established 1 Jun 1958. It is a naval sub-area command responsible to CINCLANTFLT for all of the Atlantic Command area south of the Tropic of Cancer excluding areas now in the Eastern and Caribbean Sea Frontiers and including that portion of the Atlantic Command area in the Indian Ocean.

• SEA FRONTIERS—The sea frontier commands are responsible for activities in their area which involve

search and rescue, local antisubmarine action, control of merchant shipping and harbor defense. Pearl Harbor is the headquarters of *Hawaiian Sea Frontier. Eastern Sea Frontier* has headquarters at New York. San Francisco is the headquarters of *Western Sea Frontier.* The headquarters of the *Caribbean Sea Frontier* is San Juan, Puerto Rico. Kodiak, Alaska, is headquarters for the *Alaskan Sea Frontier.*

• SERVPAC and SERVLANT. (*Service Force Pacific* located at Pearl Harbor, and *Service Force Atlantic* located at Norfolk, Va.). These commands direct, plan, supervise and furnish logistic support to the Fleets, including the Fleet Marine Forces. The scope of Service Force duties include logistic support for outlying activities within the Atlantic and Pacific commands, naval components of joint commands, and U. S. Army and U. S. Air Force units prescribed in joint agreements. The Service Forces also provide logistic support to naval forces of other commands as required.

• OPDEVFOR — *(Operational Development Force).* This command, located at Norfolk, Va., tests and evaluates new weapons and equipment for service use.

• MINLANT—*(Mine Force Atlantic).* Headquarters located at Charleston, S. C. This command has a dual responsibility—that of laying mines, and carrying out mine countermeasures. Mine countermeasures are actually the Mine Force's biggest job—operations undertaken in order to reduce or eliminate the hazards caused by mines. This includes (1) the destruction of enemy mines before they are planted; (2) the destruction of enemy mine planting vehicles and location of mines by visual or electronic means as they are being planted; and (3) sweeping or destroying mines after they have been planted.

• MINPAC — *(Mine Force Pacific).* Has headquarters at Long Beach, Calif. Has same responsibility in the Pacific as that of MINLANT in the Atlantic.

• FMFPAC and FMFLANT—*(Fleet Marine Force Pacific,* located at Camp Smith in Aiea at Pearl Harbor and *Fleet Marine Force Atlantic,* located at Camp Lejeune, N. C.). These commands lead the Marine "sea soldiers" who fight with the Fleet in amphibious and other operations.

• TRALANT and TRAPAC—(*Training Command Atlantic* has headquarters at Norfolk, Va., and *Training Command Pacific* has headquarters at San Diego, Calif.). These training commands are in charge of precommissioning, shakedown, refresher and operational training in accordance with the doctrines and requirements of type commanders; they assist in the development of training doctrines, policies, and exercises; and insure the standardization of these training exercises which are applicable to more than one type command.

• NAVAIRPAC and NAVAIRLANT—(*Naval Air Force Pacific* with headquarters at San Diego, Calif., and *Naval Air Force Atlantic* with headquarters at Norfolk, Va.). These commands are responsible for the over-all operation, training and control of all aircraft, ships and other units which comprise the Pacific and Atlantic Fleet's naval air strength.

• NAVMARIANAS—*(Naval Forces Marianas).* Headquarters are on the island of Guam, M. I. The guiding hand for the vast area, two-and-one-half million square miles of the Pacific Ocean, which includes the island groups of the Marianas, the Bonin-Volcanoes and the eastern, central and western Carolines, is that of COMNAVMARIANAS. Actually, he holds two titles. The other is that of Representative of CINCPAC in the Marianas-Bonin Islands. Within the area of his command, COMNAVMARIANAS is responsible for naval surface and air reconnaissance, peacetime search and rescue operations, and in the event of hostilities, the conduct of antisubmarine warfare.

• NAVFORJAP—*(Naval Forces Japan).* Headquarters are in Yokosuka. This command conducts naval operations, in coordination with other military commands, in defenso of the area of Japan in order to provide support to the Pacific Fleet in controlling the seas within the Pacific command in the event of war.

• NAVFORNORAD (CONAD) — *Naval Forces North American Air Defense* (Continental Air Defense). Headquarters of CONAD is at Ent Air Force Base, Colo. This combined service command defends the United States against air attack. To do this, operations are divided into four distinct phases: (1) detection, (2) identification, (3) interception and (4) destruction. Naval Forces North American Air Defense is the senior coordinating naval unit serving under CONAD.

• NAVFORKOREA — *(Naval Forces Korea).* Headquarters located in Seoul. This command conducts naval operations in coordination with other military commands in defense of the Republic of Korea in order to provide support to the Pacific Fleet in controlling the seas within the Pacific command in the event of war.

• U. S. COMEASTLANT—*(U. S. Command Eastern Atlantic).* Headquarters are in London. As a subordinate of CINCLANTFLT, exercises operational control over certain Atlantic Fleet units operating in the U. S. EastLant sub-area, and provides logistic and administrative support as directed by CINCLANTFLT.

• NAVPHIL—*(Naval Forces Philippines).* Headquarters located at Sangley Point. This command conducts naval operations in coordination with other military commands in defense of the Philippines in order to provide support to other U. S. and Allied forces in controlling the seas within the Pacific command.

• TAIWANPATFOR—*(U. S. Taiwan Patrol Force).* Headquarters are afloat. This command employs forces assigned to conduct air and surface patrols and coordinate search and rescue operations in the Taiwan area in order to support the missions of the Seventh Fleet and the U. S. Taiwan Defense Command.

—Thomas Wholey, JOC, USN.

THE U.S. FLEETS

WORKING WITH THE FREE NATIONS DEPLOYED FOR DEFENSE OF THE FREE WORLD

ALASKA

ASIA

CANAD.

UNITED S

2nd F

1st FLEE

7th FLEET

INDIAN OCEAN

AUSTRALIA

The United States Navy today works side by side with other free nations of the world the
fleets, made up of ships and submarines with guided missile capabilities and carrier-based
that can operate at distances far removed from prepared land and air bases. Today's F
have the ability to shift rapidly from one area to another, from defense to offense, and
functioning as efficient mobile bases.

FORCES IN THE PACIFIC OCEAN AREA

- CINCPACFLT
- WESTSEAFRON
- ALSEAFRON
- HAWSEAFRON
- NAVFORJAP
- NAVFORKOREA
- NAVPHIL
- NAVMARIANAS
- TAIWANPATFOR
- NAVAIRPAC
- SUBPAC
- FMFPAC
- PHIBPAC
- TRAPAC
- MINPAC
- CRUDESPAC
- BARPAC
- SERVPAC
- NAVFORNORAD (CONAD)

FORCES IN

- CINCLA
- CINCNEL
- EASTSE
- CARIBSE
- NAVAI
- CRULA
- DESLA
- SUBLA
- PHIBL

SEATO NATIONS

Southeast Asia Treaty Organization is an alliance created by treaty signed in Manila, P. I., 8 Sep 1954, for common defense by its members against armed attack or a threat ta peace and security.

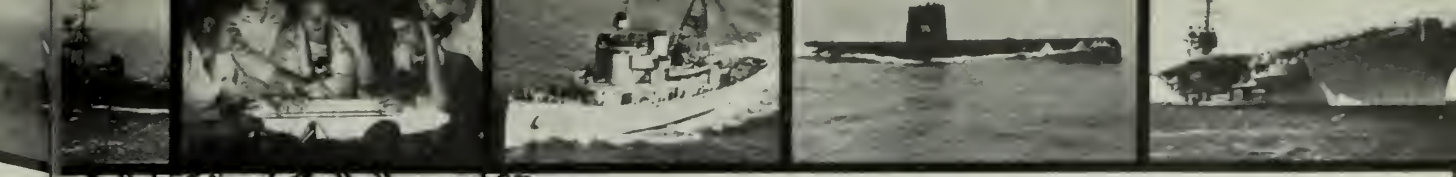
AUSTRALIA NEW ZEALAND PHILIPPINES UNITED KINGDOM (Extended by Protocol: LAOS
FRANCE PAKISTAN THAILAND UNITED STATES CAMBODIA VIETNAM)

ANZUS NATIONS

Multilaterol treaty, which went into effect in April 1952, provides for the common defense by its members against armed attack or threat to peace and security.

AUSTRALIA NEW ZEALAND UNITED STATES

Prepared by ALL HANDS Magazine



GREENLAND

EUROPE

ASIA

6th FLEET

AFRICA

SOUTH AMERICA

INDIAN OCEAN

stand for a stable peace. These
n, provide a mobile, tactical force
fueling and resupplying underway,
ot seo for weeks at a time, while

ATLANTIC OCEAN AREA

- MINLANT
- FMFLANT
- SERVLANT
- TRALANT
- MIDEASTFOR
- SOLANT
- ASDEFORLANT
- OPDEVFOR
- USCOMEASTLANT

NATO NATIONS

North Atlantic Treaty Organization, established by treaty in Washington, D. C., 4 Apr 1949, was designed to facilitate the joint defense of the signatories against threat to their territorial integrity or political independence.

BELGIUM	FRANCE	LUXEMBOURG	NORWAY	UNITED KINGDOM
CANADA	GREECE	ITALY	PORTUGAL	UNITED STATES
DENMARK	ICELAND	THE NETHERLANDS	TURKEY	WEST GERMANY

RIO PACT NATIONS

Inter-American collective defense treaty, which went into effect 2 Sep 1947, makes provisions for assistance in the case of attack and provides for consultation on measures to resist subversive activities from outside and for settlement of disputes among the members of the Pact.

ARGENTINA	COLOMBIA	ECUADOR	HONDURAS	PARAGUAY
BOLIVIA	COSTA RICA	EL SALVADOR	MEXICO	PERU
BRAZIL	CUBA	GUATEMALA	NICARAGUA	UNITED STATES
CHILE	DOMINICAN REPUBLIC	HAITI	PANAMA	URUGUAY

VENEZUELA

★ ★ ★ ★ TODAY'S NAVY ★ ★ ★ ★

AT SEA—Carriermen on board USS *Lake Champlain* (CVA 39) take time out from their shipboard routine to participate in exams for advancement in rating.

Arneb Knows the Antarctic

For the fourth consecutive year, the attack cargo ship USS *Arneb* (AKA 56) and her crew have taken part in Deep Freeze operations in the Antarctic.

Their voyage this time, as in the past, took them from Davisville, R. I., to Norfolk, Va., then halfway around the world to New Zealand via the Panama Canal.

After a few days for rest and relaxation at Port Lyttleton, N. Z., *Arneb* will again cross the Antarctic Circle, en route to Cape Hallett to unload cargo for that Antarctic base.

Experience of the past few years stands the crew in good stead. During unloading procedures, the crew works two 12-hour shifts. Hatch crews, winch crews, boat crews, engineers, deck watch standers—everyone works 12 hours each day until the job is done. Four meals a day are served during these 12-hour stints; the usual three plus a hot meal at midnight.

After Cape Hallett, the ship moves some 400 miles farther south to unload cargo for McMurdo Sound. At this station she is moored alongside the ice shelf and cargo is transferred directly from ship to shelf. This means another around-the-clock work-day.

When all supplies for the Antarctic stations are off-loaded, *Arneb* will head north through the ice-bound seas and return to the United States via New Zealand.

YESTERDAY'S NAVY

In January 1820 USS Congress, the first American warship to visit the Philippines, arrived in Manila. On 6 Jan 1815, a U. S. launch on Lake Borgne, La., captured and burned the brig Cyrus, loaded with clothing for the British Army. On 8 Jan 1847 COMO R. R. Stockton led a naval force in a successful land attack on Mexican troops entrenched near Los Angeles, Calif. On 17 Jan 1943 a U. S. Naval Base and Naval Air Station were established at Brisbane, Australia. On 26 Jan 1856 a small landing force from USS Decatur, aided by gunfire from the ship, successfully repulsed an Indian attack on Seattle, Washington.

Mobile Amphib Squadron

A new highly mobile amphibious squadron has been established as a part of the Atlantic Fleet's Amphibious Force. Spearheading the new squadron, designated Amphibious Squadron 10, is the carrier USS *Boxer* (CVS 21). Although an ASW support carrier, *Boxer* will function as an amphibious assault ship while serving with PhibRon 10.

In addition to *Boxer*, PhibRon 10 will have four high-speed dock landing ships, all of which have helicopter landing platforms. Reassigned from the four existing amphibious squadrons, these ships are USS *Hermitage* (LSD 34), Fort *Snelling* (LSD 30), *Plymouth Rock* (LSD 29) and *Spiegel Grove* (LSD 32).

Creation of the new squadron will give the Amphibious Force a fast, highly mobile squadron capable of putting into operation the fast landing force concept and the technique of vertical envelopment.

Establishment of PhibRon 10 doesn't change the major command structure of the Amphibious Force. But other organizational changes took place at the same time. These involved the disestablishment of seven commands and the reassignment of several ships. They include the following:

- Disestablishment of Landing Ship Flotilla 2, composed of LST Squadrons 2 and 4, LCU Squadron 2, and LCU Divisions 21, 22 and 23.
- Reassignment of the Flotilla's 14 LST-type ships as evenly as possible to the other four Amphibious Squadrons and transfer of the six LCUs to Boat Unit 2.
- Changes in titles and designations from Commander Transport Squadrons to Commander Amphibious Squadrons and Commander Transport Amphibious Squadron 2, 4, 6 and 8 to Commander Amphibious Squadron 2, 4, 6 and 8.
- Shifting of USS *Krishna* (ARL 38) and *Kleinsmith* (APD 134) from the disestablished Landing Ship Flotilla to Commander Amphibious Squadrons.
- Transfer of USS *Rankin* (AKA 103) from Amphibious Squadron 8 to Amphibious Squadron 4.

Arcas, New Research Rocket

The Navy is testing a new 71-pound solid propellant rocket capable of lifting a 12-pound payload to an altitude of 200,000 feet.

Known as *Arcas*, the single-stage rocket is about four and one-half inches in diameter and only six and one-half feet long. It is equipped with a separation device which ejects a nose cone and parachute assembly at the top of the trajectory.

Unlike other rockets at present used for atmospheric research, *Arcas* was designed by meteorologists. Instead of modifying existing military weapon-type rockets, the scientists designed an entirely new system which can be used in atmospheric research programs in many places, including colleges and universities.

One problem in adapting a military rocket is the strain and stress the high acceleration rates place on the rocket instrumentation. *Arcas*, in contrast, was especially designed to rise with a low-acceleration rate. This eliminates the need and expense of ruggedizing the instrumentation. The low-acceleration rate, combined with the long-burning time of *Arcas*, features normally associated with large, liquid-propelled rockets, are the result of Bureau of Ordnance research and development in solid propellants.

The rocket's launcher weighs only 390 pounds and it can be assembled by two men in two hours. The small, low-cost rocket can be launched from either land or aboard ship.

The separation device in *Arcas* contains two pyrotechnic charges which propel the 12-pound parachute and nose cone assembly from the expended rocket motor.

The parachute itself was specially designed and developed for use at the 200,000-foot level. It has an extended skirt to insure a stable descent. The parachute is coated with aluminum so that it can be tracked by radar. It has a two-inch hem containing methanol which vaporizes and provides the necessary inflation pressure.

After several successful static tests, *Arcas* is expected to undergo three test flights during the month of October at White Sands, N.M. The first will be an uninstrumented flight designed to test the launcher, rocket motor and separation device.

The second and third tests will be made with parachutes and instruments that measure acceleration, motor case pressure, skin temperature, angle of attack and post-burnout attitude.

Actual data-gathering flights to obtain temperature wind profiles are expected to begin early in 1959.

PARACHUTING PADRE — LT Edward P. Hammond, CHC, USN, is one of four Navy chaplains who also have the designation of Naval Parachutist.

Real Sky Pilot

During its 34-year history, the Parachute Rigger School at NAS Lakehurst, N. J., has qualified thousands of parachutists. Of these, four have been chaplains.

One of the chaplains to earn the designation of Naval Parachutist is LT Edward P. Hammond, CHC, USN, who earned the designation by completing his sixth jump last fall.

Chaplain Hammond is a volunteer to the Antarctic Support Activities schedulde for deployment to the South Pole. His tour there will be for about a year while attached to Operation Deep Freeze IV.

Although parachute descents are not planned as a primary means of transportation, Chaplain Hammond's designation as a qualified parachutist will enable him to administer spiritual assistance to men in even the most remote areas of the pole.

Ingersoll Rescues Two Adrift

For three days two Okinawan fisherman drifted in their 20-foot boat. With no food left and hopes of rescue fading fast, they thought they might last one more day.

Their fears were erased by the appearance on the horizon of a Seventh Fleet destroyer, USS *Ingersoll* (DD 652). *Ingersoll* had been operating with a carrier group when the OOD, LTJG John W. Leith, spotted the small boat.

The lifeguard detail, under the direction of ENS C. McRight, Jr., and Chief Boatswain's Mate John Wiberg, brought the two men and their boat aboard. After a hot shower, some fresh clothing, and a hot meal, the two fisherman told their story.

They had left their homes three days before to fish. Their engine failed while in the fishing area and high winds and heavy seas carried them out to sea. Fearing their boat would be swamped, they threw their engine overboard. They said they had given up hope of being rescued.

LAST SALUTE—Chief Boatswain's Mate Harry D. Settle, USN, is piped over side of *USS Etlah* (AN 79) as he leaves for Fleet Reserve after 24 years' active duty.

Quenching Thirst of NS Argentia Citizens Is a Nagging Problem

The Naval Station at Argentia, Newfoundland, has the best of modern equipment for transportation on land, sea and air. But, it couldn't get anywhere in solving a really critical problem until it put a hay-powered assistant on its payroll.

Argentia experienced an unusually dry season this year. The station's main water reservoir was being depleted at an alarming rate.

This situation was foreseen several years ago, when a gas-driven pump was installed at a backwoods lake which could be used to augment the main reservoir in case of emergency. Since rough terrain made the lake inaccessible for land vehicles, fuel for the pump had to be flown in by helicopter.

Then, the 'copter broke down.

Engineers and planners surveyed the area, made various calculations and offered numerous suggestions —but they didn't quite solve the problem. A janitor who overheard their deliberations came up with the ideal solution—"Get a horse."

He knew where a small pack horse could be hired. The animal

Argentia's Water Boy

wasn't immediately available for an employment interview, but the experts, by means of micrometers, tapes and slide rules, calculated that he could carry about 22 gallons of gas.

Saddle bags were manufactured and taken to the place where the horse was supposed to be. However, Old Paint had said goodbye. He'd strayed into the hills and could only be found with the aid of a helicopter.

Meanwhile, back at the reservoir, the water was getting lower.

A resident of the area offered to rent another horse, which was quite a bit larger than Old Paint. The engineers were delighted. They went to work all over again with slide rules and such, and calculated that this horse could haul a full barrel of fuel over "the hump," a big hill on the way to the lake.

Now, everything seemed ready for the push-off — until someone remembered a very important detail. The horse would have to be put on the payroll, and fed.

On top of all this, it was discovered that on finishing his meal the horse was getting mighty thirsty. Since the water lay beyond the horizon, the animal's thirst was quenched with canned orange juice, and the big trek began.

Before long the pump had its gasoline, the station had its water and everyone was happy. Dobbin had become a hero by going over the hill.

—Joe Scaperotta.

Mass Flight Across Pacific

Two Marine jet fighter-attack squadrons have demonstrated their readiness, mobility and range capability in a flight from Hawaii to Japan.

The flight of 24 FJ-4B *Fury* jets of Marine Attack Squadrons 212 and 214 marked the first trans-Pacific crossing to be made by Navy or Marine fighter aircraft in squadron strength.

Designated "Cannon Ball," the flight originated from the Marine Corps Air Station, Kaneohe, Oahu, T.H., and was completed at the Naval Air Station, Atsugi, Japan. It was made in 12 hours' air time.

In-flight refueling was accomplished by Air Force KB-50 jet tankers in the vicinity of Wake Island and again near Iwo Jima by Navy AJ aerial tankers. With overnight layovers at Midway and Guam, the crossing was completed in approximately three days.

Both squadrons are part of Marine Air Group 13, which was deployed on a rotational basis to the Far East in support of Marine forces in that area.

Remaining elements of MAG-13, including maintenance and support personnel and equipment, were sent to Japan aboard USS *Cape Esperance* (CVU 88) and the attack transport USS *Pickaway* (APA 222).

To New Duty — by Boat

There are many modes of transportation in carrying out a set of transfer orders—private car, bus, train, plane or, in the case of at least one man, walking. There is yet another way—by private boat. And CDR William Staples, DC, USN, is the man who did it.

Last July, CDR Staples decided to use his boat *Ichiban* as a means of travel in carrying out his transfer from Bainbridge, Md., to his new duty station as dental officer aboard USS *Yosemite* (AD 19) at Newport, R. I.

Using his leave time and traveling alone, he took the helm of his 22-foot boat and chugged out of the Northeast River Yacht Basin on the first leg of his 416-mile trip.

A few statistics concerning *Ichiban* show that she is 22 feet three inches long with a beam of eight feet. She is powered by a six-cylinder 96-horsepower engine which revs up to 2250 rpms when cruised at 10 knots. There is sleeping space for two in the cabin and two in the cockpit, and there is a head and a galley.

If you should be planning on a future transfer and would like to take the same route, here's the one CDR Staples used:

Down the Northeast River to the Elk River then through the Chesapeake and Delaware Canal to Cape May, N. J. From Cape May to Atlantic City, then on to Brielle, N. J. From here to East Rockaway Inlet, L. I., through the N. Y. State boat canal to Mastic Beach, N. Y. From Mastic Beach to Shinnecock Canal where he was locked through one of the locks to Great Reconic Bay, N. Y.; on to Sag Harbor then Montauk, L. I.

From here it was a straight shot to Newport where he was met by his family and friends. Then it was just a jaunt to the small boat piers at the Newport Naval Station.

There were seven fuel stops during the three-day, three-and-a-half-hour journey. A transom on the boat had been converted into a lazaret which gave stowage for an extra 10

gallons of gasoline. This, plus the regular tank, gave him 40 gallons when topped off. He figured on nine to 10 hours of cruising while burning four to 4.5 gallons an hour.

"I only encountered one day of bad weather," CDR Staples recalled. "That was in the New York State Canal when thunderstorms churned the water rather violently."

There was one point the commander didn't stress. It was a little rough at times while cooking with one hand and steering the boat with the other.

Plenty of Bounce

An enlisted Wave, three naval aviation cadets, two ensigns, an LTJG and a civilian physical fitness instructor from NAS Pensacola, have bounced from obscurity to national recognition.

Known as the "Starflights," this unusual high-flying combination for the past three years has been bouncing around the country on a piece of canvas stretched tightly over a metal frame.

They got their start back in 1955, when the Naval Air Basic Training Command founded a trampoline demonstration team. Joe Louder, physical fitness instructor at the Pre-Flight School, organized the team and assumed the coaching duties. Today, he still holds down the coaching spot and is also an active member of the team.

The Starflights now hold a place alongside the famed Blue Angels, the NavCad Drill Team and Cadet Choir when it comes to being officially recognized as an instrument of recruitment and publicity.

Besides Coach Louder, the "tramp" team's eight members are NavCads Carl Ott, Bud Lineberger and George Guerra; Ensigns Lanny Gorman and Philip Drips; LTJG W. R. Zipperer; and Wave Sally Wilcox, PR3, USN.

LTJG Zipperer is the only member of the team who had had experience on the "tramp" before reporting to Pensacola. He is one of the country's top gymnasts, according to Coach Louder.

ENS Gorman has already proved his athletic ability at national ski jumping meets, while ENS Drips is known for his swimming accomplishments. Ski-jumping and swimming are both similar, in a sense, to trampolining, as they too require extensive body coordination.

Trampolining got its start many years ago when a French tightrope walker and high-wire acrobat began to experiment with his safety net. He found that by tightening the net, he could use it for tumbling and acrobatic tricks that were a delight to both the audience and acrobat. His name was Trampolina, hence the new device was given the name trampoline.

It was not until the early 1930s that the "tramp" took hold in the United States. At that time it was almost as popular as the hula hoop was recently. George Nisson, a former naval officer and national tumbling champion, was instrumental in spreading the fad through his daring demonstrations.

PULLING TOGETHER—Deck gang of *USS Macon* (CA 132) handle lines while rigging their cruiser for highline transfer of supplies while cruising Atlantic.

FANCY TOUCH—Navy baker puts the finishing touches on a batch of goodies designed to please the best.

Marine Invents 'The Thing'

Marine All-Weather Fighter Squadron 531 has not only come up with something they call "The Thing"—but they have also gone ahead and put it into operation.

So dubbed by its designer and builder, TSGT W. Martin, USMC, it's quite the thing. Actually, it's a pneumatic tester for aircraft ejector racks.

In addition to testing ejector racks 'The Thing' has proved successful in testing the pneumatically operated Mark XII guns and Mark VII gun feeders on F4D-1 *Skyray* jets.

Until 'The Thing' was invented, ejector racks were tested by firing a small cartridge charge of black powder into the device, activating the ejector rack and releasing the load. But this method required the ejector assembly to be cleaned after each firing.

All it takes now is the push of a button and 'The Thing' does the same job. It sends air pressure at 1000 pounds per square inch through the system, activating the ejector racks. No more cleaning of the ejector assembly.

'The Thing' is well adapted for field use since it weighs only 45 pounds. The entire unit consists solely of bottled air containers, a pressure reducer valve, pressure gauge, control valve and air lines.

Antarctic Duty Is Rough and Tough, But It's All in Day's Work for USS Brough

LONESOME DE—*USS Brough* (DE 148) recently left for her third tour with Operation Deep Freeze and picket duty in lonely and rough seas.

USS *Brough* (DE 148) stood ready at the pier in Key West, Fla.

A little before 0900 came the order: "Single up all lines."

With those words LCDR B. E. Boney, USN, *Brough's* captain, signalled the start of the third Deep Freeze operation for a little ship with lots of pride and good reason for it.

The bridge itself appeared normal enough that morning. The same men were doing the same things they did on a routine day, as though the ship were only going out for a few hours. Talkers repeated their orders in the same matter-of-fact tones. Check-off lists were whittled down at a regular pace. And, the bustle of activity on the bridge was much the same.

The skipper waited on the quarterdeck until the last moment.

Then, he kissed his wife and three children goodbye for eight long months, turned and hurried to the bridge. Many on board knew how he felt, for they too were parting from their families.

Goodbyes over, the ship was ready to leave for one of the loneliest spots in the world, a station about halfway between New Zealand and Antarctica where she was to serve on weather, communications and SAR picket duty in some of the roughest waters on earth.

The band on the pier struck up a march. Brassy notes cut into everyone's thoughts. The Florida sun glinted off golden instruments and starched white uniforms to add to the brightness of the music.

Nearby stood clusters of families and friends of the men of *Brough*.

Officers from DesDiv 601 watched as the ship prepared to get underway.

"Take in all lines," the captain ordered.

Mooring lines snaked in from the pier, and the ship swung slowly out.

Brough slid smoothly off, backing down between the ships as quickly as she could. Her moment as the center of attention seemed over until, unexpectedly, all the other ships' whistles blared their salute to "Little *Brough*," as the DE had been dubbed by the newspapers. The band played again and wives, children and friends waved for one last time before *Brough* passed out of sight.

The ship swung around and started ahead. As she approached the Key West Main Base a flashing light message was received from USS *Howard D. Crow* (DE 252), a long-time running mate of *Brough* and one of her sidekicks in DesDiv 601. *Crow* had evidently read the news stories about *Brough's* departure. The message read:

"Bye, Little *Brough*."

This was the beginning, some months back, of another Deep

BYE NOW—Seaman honor guard comes to present arms as *USS Brough* prepares for duty in cold seas operating with Task Force 43.

Freeze tour for the DE.

Her next stop was Panama. After that came a 6900-mile trip across the Pacific and a few days in Dunedin, New Zealand, before she headed for her station at 60° S, 170° E.

Today she patrols about 20 days out of every month during the Deep Freeze operation. For about one week a month she's in friendly Dunedin. On her trips between Dunedin and her station she crosses the "Roaring Forties," "Furious Fifties" and "Screaming Sixties."

While on station *Brough* acts as a weather ship and as a guide to supply planes boring through murky skies on their way toward the Pole. She also stands ready as a search and rescue ship in case one of the planes has to ditch.

For the pilots, on their long flights over desolate, forbidding waters, it's a real comfort to know that *Brough* is down there.

—E. K. Frear, ENS, USN.

Fog Machine

A machine that can look into the future—at least so far as fog is concerned—has been developed by LCDR David H. Minton, Aerology Officer at NAS Lakehurst, N. J.

The Short Range Fog-Forecasting Machine, as it is called by its designer, can actually predict the formation of fog up to four hours in advance. LCDR Minton has found that, with research in this direction, he will be able to forecast thunderstorms two to four hours in advance.

The aerologist began his research on fog-forecasting in 1950, while attached to the Naval Research Laboratory in Washington, D. C.

In the past, fog was predicted by watching the dew point and temperature. When these two factors come within three degrees of each other there's a very good chance that fog will form. However, LCDR Minton found that there must also be a state of low conductivity in the atmosphere. If the conductivity is high, fog will not form, no matter how close the dew point and temperature are to each other. The fog-forecasting machine, which measures electricity in the ground and in the air, supplies this important data.

At present, there are only five fog-forecasting machines in existence, all of them constructed from LCDR Minton's design. One of the machines is used at Lakehurst.

In commands where the devices have been used, they've drawn high praise from pilots and aerologists. After one of the machines was used aboard uss *Iowa* (BB 61) in the fall of 1957, Commander Second Fleet wrote the Chief of Naval Operations, commending the machine's performance and suggesting further research in the field.

One airship pilot at Lakehurst is so sold on the fog-forecaster that he calls the aerology office before every flight to ask: "What does Mr. Minton's fog machine say today?"

This Simulator is NEWS

A Navy Electronic Warfare Simulator (NEWS) has been unveiled at the Naval War College, Newport, R. I. NEWS was developed to provide officer students with a reproduction of actual battle situations. The officers use their own judgment and professional experience under the most realistic war-game conditions possible.

Consisting of equipment rooms, control rooms, an umpire area and a series of command centers, NEWS is an installation one block long and three stories high.

Before the development of NEWS, advanced training for officers on a large scale was impracticable because of the high cost of new weapons and weapons systems necessary in mock Fleet exercises.

Basically a two-sided naval warfare simulator, NEWS has been 13 years in conception, design and construction and is expected to revolutionize the art of war gaming completely. It will provide War College students with an instantaneous and continuing picture of a tactical situation from the moment of initial contact with enemy forces until one force has been destroyed or rendered ineffective.

In addition to its use in training students, it may provide a much needed tool to explore and evaluate the feasibility and effectiveness of new tactics.

Actual war-game conditions are simulated as nearly as possible. Images of each simulated force are portrayed on a 15-foot master plot screen through the use of optical projectors. NEWS provides extensive communications systems, as well as force radar presentations. It indicates course, speed, and in the case of aircraft or missiles, altitude of the various elements.

Commanders, their staffs, and individual unit commanders are located in the various command centers. From there the commanders observe and evaluate the situation as it develops. They exercise control of forces and test the soundness of plans exactly as they would under combat conditions.

Umpires are located in an auditorium which is physically separated from the command center. Each umpire is an officer with wide professional experience in the type of operation he umpires.

Rapid calculation of results of interactions enables the battle action to progress at any rate of speed, or to hold the action at any point during the course of action to permit detailed analysis by the students.

Automatic Aircraft Navigators

A contract for automatic radar navigation equipment for aircraft has been awarded by the Navy.

Adaptable to all naval aircraft, the self-contained navigation equipment will automatically compute and display ground speed and drift angle without the aid of ground stations, wind estimates or true air speed data. With this new indicator, pilots can reach their destination with certainty under all conditions without time-consuming manual computations.

Considered a major breakthrough in conquering navigation problems, the equipment will first be used in the *Neptune* and *Marlin* patrol planes, carrier-based *Skywarriors*, and three other aircraft types.

The equipment is highly adaptable and can be used with a number of ground position computing and indicating displays now in use.

Sound of the Teletype is Music to Teleman's Ears

Although John E. Blair, TE (RM) 1, USN, knew how to play the trumpet, guitar and harmonica, people laughed when he sat down at the keyboard to play a tune. Since the keyboard was on a teletype machine, you can't much blame them.

Now, however, Blair not only makes music with the machine, but he has also taught it to draw.

The notes of the "tele-music-typewriter" are actually electronic buzzes produced when a key is struck. Ordinarily, the buzzes can't be heard, but Blair has rigged a five-inch speaker on the machine to amplify them. Through various settings he has given each buzz the quality of a musical note and each note a different pitch in the musical scale. The machine's range covers two octaves. It took Blair two weeks of spare-time tinkering to turn the machine into a musical instrument.

WORDS AND MUSIC — J. E. Blair, TE(RM)1, strikes up a tune on keyboard of his 'tele-music-typewriter.'

Teaching the machine to draw also requires quite a bit of work. By punching X's that make up the outlines of a design, Blair works out the drawings on an ordinary typewriter. The design, together with an appropriate tune, can then be transferred to a code strip, he says, and in turn is fed into the teletypewriter. The punched "memory strips" guide the machine through its performance.

The first time he taught the machine to play was "Anchors Aweigh." At the same time, it drew an anchor, complete with USN across the shank. The machine also plays the Marine Corps Hymn while drawing an appropriate insigne. For an encore it can draw the Statute of Liberty while playing "God Bless America."

Blair is an instructor at the Teletype Maintenance School, Naval Schools Command, at the Naval Base, Norfolk, Va. Incidentally, he is a top typist, and has a reputation for being an ace maintenance man, keeping equipment in singing condition.

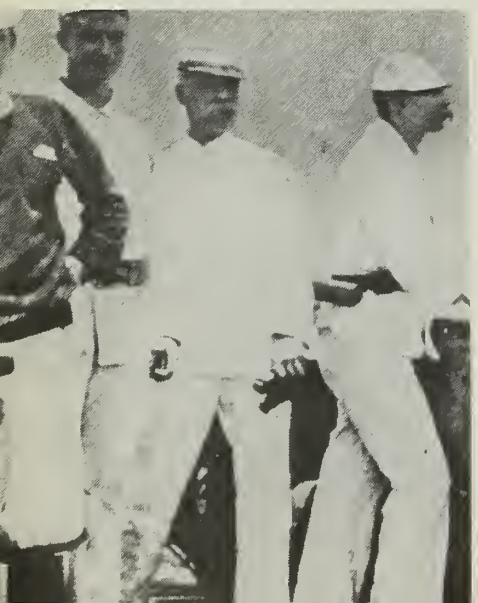
BATTLE QUEEN—*USS Olympia* is shown in painting during Battle of Manila Bay while serving as Dewey's flagship.

USS Olympia, Victor at Manila Bay, Still Serves

USS OLYMPIA, Admiral Dewey's flagship at the Battle of Manila Bay, is now serving on new duty. She's a national memorial and marine museum.

Through the efforts of the Cruiser *Olympia* Association and a ship repair firm, she has been restored and repaired to make her safe and presentable, and is now on public display at the foot of Market Street in Philadelphia, Pa. She achieved her present status after a long struggle for survival which saw her on the brink of the scrap heap several times.

COMMODORE Dewey directs from his fighting flagship, *USS Olympia*.



Named for the capital city of the state of Washington, *Olympia* was commissioned at San Francisco, Calif., on 5 Jan 1895. Though she would be dwarfed beside such present-day ships as USS *Forrestal* (CVA 59), she was large for her day. She measures 344 feet in length and 53 feet in waterline breadth. She had a design complement of 33 officers and 378 enlisted men. In short, she was comparable to a modern destroyer.

As Dewey's flagship, *Olympia* was with the Asiatic Squadron in China when the Spanish-American War began. With the other ships, she was ordered to the Philippines, where the darkened squadron stole past the batteries on Corregidor to arrive off Manila at daybreak on the morning of 1 May 1898. What happened next is described in this passage from Dewey's autobiography:

"At 5:40, when we were within a distance of 5000 yards [of the Spanish fleet], I turned to Captain Gridley [*Olympia's skipper*] and said, 'You may fire when you are ready, Gridley.' While I remained on the bridge with Lamberton, Brumby and Stickney, Gridley took his station in the conning tower and gave the order to the battery. The very first gun to speak was an eight-inch from the forward turret of the *Olympia*, and this was the signal for all the other ships to join the action."

During the fight, which made it plain that the United States had become a real naval power, the Spaniards lost 11 ships sunk or burned and a number of tugs and smaller launches were captured. Out of 1800 men, 381 were killed or wounded, while not a single U. S. ship was damaged, nor a single man under Dewey seriously hurt. One American died of a heart attack.

Olympia remained in the Philippines until 20 May 1899 assisting in the blockade and capture of Manila. She arrived at Hong Kong on 28 May 1899 and on 6 Jun 1899 departed China for her return to the United States, via Suez and the Mediterranean. She arrived in Boston on 10 Oct 1899 and was placed out of commission in reserve 8 Nov 1899. She was again commissioned in January 1902, when she began a four-year hitch as flagship of the newly formed Caribbean division of North Atlantic Squadron. In that capacity she helped protect American lives and property at Smyrna, Turkey; Panama; Tangier, Morocco; and waters of the Dominican Republic. She was placed out

of commission in reserve on 2 Apr 1906, at Norfolk.

Olympia was recommissioned during the spring and summer months of 1907-1909 for the annual summer midshipmen cruises. She remained at Annapolis, in reserve, until 2 Mar 1912, when she sailed for Charleston, S. C., for service as barracks ship.

During WW I she performed escort and patrol duties. She spent some time in drydock after suffering serious damage when she ran aground on a shoal while on a wartime patrol.

After the war, as a special ambassadress of good will, she visited many ports in the Black Sea and the Mediterranean, landed a peacekeeping force in Dalmatia (now part of Yugoslavia) and assisted in the delivery of two former Austrian battleships to Italy.

By then the old girl was aging. She spent some time as flagship of the Atlantic Fleet Training Command, then was given a final mission worthy of her many years of faithful service. On 3 Oct 1921 she set out for Le Havre, France, where she received the Unknown Soldier of World War I. She returned the body to the United States for burial in Arlington National Cemetery.

In 1922 the ship was decommissioned for good at Philadelphia Navy Yard. Yard workmen did what they could to protect her from the elements.

When World War II came along, new ships were built and some of the oldtimers were put back on active duty, but not *Olympia*. Rusting and forgotten, she sat out the war in the Navy Yard's Reserve Basin. She narrowly escaped scrapping—saved only by the intervention of Spanish-American War veterans and other patriotic groups.

After the war there was talk of making *Olympia* a permanent public memorial. The District of Columbia, San Francisco and Olympia, Washington, were claimed as suitable locations for her.

Finally, a group of Philadelphians founded the Cruiser *Olympia* Association. Fund-raising campaigns slowly inched toward the $200,000 it would take to save the ship. But time was running out.

The Navy found the cost of maintaining the veteran warship prohibitive, since the effort diverted funds needed elsewhere. Something had to be done.

Then, a Philadelphia ship repair company (the Keystone Drydock and Ship Repair Company) offered to get *Olympia* in shape for public display and to underwrite repairs until the *Olympia* Association had collected funds to pay for them.

In September 1957 the old ship was released to the association and towed to the repair firm's yard for a face-lifting designed to bring back some of her youthful beauty. The task took about a year.

Although her hull remained sound, there was still a lot of work to be done. Restoring her interior was the biggest part of the job.

SAVED—After 35 years at pier-side tug moves *USS Olympia* away for restoration.

In addition, replicas of her eight-inch turrets were built, her masts and superstructure were restored and she was repainted in her original white and spar color scheme. Furniture and equipment were obtained from the Naval Shipyard or private individuals. The engineroom was also squared away.

Olympia's name has now been stricken from the Naval Register. But she is not forgotten by today's Navymen and fellow Americans. And she will continue to serve as a symbol for generations to come.

—M. D. Buoncuore, JO1, USN.
—J. A. Lynch, ENS, USN.

TIME PASSES—Old photo shows *Olympia* in drydock in 1902. *Rt:* She is towed to her present resting place.

THE BULLETIN BOARD

Here Is the Latest on Your Status in Revised Seabee Ratings

BY 1 FEB 1959 all Navymen on active duty in Rating Group VIII (Construction) holding general service, emergency service, or exclusive emergency service ratings will have had their ratings changed to one of seven general ratings or 17 service ratings of their group.

To conform with approved modifications to the enlisted rating structure, commanding officers have been authorized since October 1958 to make the rating switch. In August last year, revised qualifications for the new ratings were published, training bibliographies were made available, and COs revised unit in-service training.

Next month, men who participate in Navy-wide examinations for advancement in rating will take a test on their new general or service rating. That's when the in-service training that started last August should pay off.

Changes in rating that will be accomplished by 1 Feb 1959 are:

Construction Electrician's Mate

- E-6 or above in the CE, CEG, CEP or CEL ratings will change to the general rating of CE (Construction Electrician).
- E-4 and E-5 or strikers with CE or CEG rating designations will change to the service rating of CEW (Construction Electrician, Wiring), CEP (Construction Electrician, Power), CET (Construction Electrician, Telephone), or CES (Construction Electrician, Shop).
- E-4 and E-5 or strikers with CEP rating designations will change to the service rating of CEP (Construction Electrician, Power).
- E-4 and E-5 or strikers with CEL rating designations will change to the service rating of CET (Construction Electrician, Telephone).

Driver

- E-6 or above in the CD rating will change to the general rating of EO (Equipment Operator).
- E-4 and E-5 or strikers with CD rating designations will change to the service rating of EON (Equipment Operator, Construction) or EOH (Equipment Operator, Hauling).

Mechanic

- E-6 or above in the CM, CMG, or CMD ratings will change to the general rating of CM (Construction Mechanic).
- E-4 and E-5 or strikers with CM rating designations will change to the service rating of CMA (Construction Mechanic, Automotive), or CMH (Construction Mechanic, Heavy).
- E-4 and E-5 or strikers with CMG rating designations will change to the service rating of CMA, except when individual experience makes an assignment to CMH more appropriate.
- E-4 and E-5 or strikers with CMD rating designations will change to the service rating of CMH, except when individual experience makes an assignment to the CMA rating a more appropriate assignment.

Builder

- E-6 or above in the BU, BUL, or BUH ratings will change to the general rating of BU (Builder).
- E-4 and E-5 or strikers with BU rating will change to the service rating of BUL (Builder, Light), BUH (Builder, Heavy), or BUR (Builder, Concrete).
- E-4 and E-5 or strikers with BUL rating designation will change to the service rating of BUL, or to BUR if more appropriate.
- E-4 and E-5 or strikers with BUH rating designation will change to the service rating of BUH, or to BUR if more appropriate.

Steelworker

- E-6 or above in the SW, SWS, or SWR ratings will change to the general rating of SW (Steelworker).
- E-4 and E-5 or strikers with SW, SWS, or SWR rating designations will change to service rating of SWF (Steelworker, Fabricator) or SWE (Steelworker, Erector).

Path of Advancement in Construction Group Ratings

Within certain ratings, construction men may specialize in as many as four categories. The path of advancement in the revised Construction (Group VIII) ratings is:

CONSTRUCTION ELECTRICIAN (CE)	CN CEW3 (Wiring)	CEW2 CE1 CEC CECS CECM
	CN CEP3 (Power)	CEP2 CE1 CEC CECS CECM
	CN CET3 (Telephone)	CET2 CE1 CEC CECS CECM
	CN CES3 (Shop)	CES2 CE1 CEC CECS CECM
EQUIPMENT OPERATOR (EO) (Former CD)	CN EON3 (Construction)	EON2 EO1 EOC EOCS EOCM
	CN EOH3 (Hauling)	EOH2 EO1 EOC EOCS EOCM
CONSTRUCTION MECHANIC (CM)	CN CMA3 (Automotive)	CMA2 CM1 CMC CMCS CMCM
	CN CMH3 (Heavy)	CMH2 CM1 CMC CMCS CMCM
BUILDER (BU)	CN BUL3 (Light)	BUL2 BU1 BUC BUCS BUCM
	CN BUH3 (Heavy)	BUH2 BU1 BUC BUCS BUCM
	CN BUR3 (Concrete)	BUR2 BU1 BUC BUCS BUCM
STEELWORKER (SW)	CN SWF3 (Fabricator)	SWF2 SW1 SWC SWCS SWCM
	CN SWE3 (Erector)	SWE2 SW1 SWC SWCS SWCM
UTILITIES MAN (UT)	CN UTP3 (Plumber)	UTP2 UT1 UTC UTCS UTCM
	CN UTB3 (Boilerman)	UTB2 UT1 UTC UTCS UTCM
	CN UTA3 (Air conditioning)	UTA2 UT1 UTC UTCS UTCM
	CN UTW3 (Water & sanitation)	UTW2 UT1 UTC UTCS UTCM
SURVEYOR (SV)	CN SV3	SV2 SV1 SVC SVCS SVCM

All service ratings (strikers, E-4 and E-5) in Group VIII are new except CEP, CET, BUL and BUH, which merely took on new names. The rating abbreviation CN (construction man) used throughout is pay grade E-3 and is equivalent to seaman or airman.

Utilities Man

- E-6 or above in the UT ratings will change to the general rating of UT (Utilities Man).
- E-4 and E-5 or strikers with UT rating designations will change to the service rating of UTP (Utilities Man, Plumber), UTB (Ultilities Man, Boilerman), UTA (Utilities Man, Air Conditioning), or UTW Utilities Man, Water and Sanitation).

Surveyor

- The Surveyor (SV) rating will be redesignated as a general rating in all pay grades, but no aetual ehange in rating will be made.

There will be no ehange in rating badges worn by men in the Construction Group. The ehange is in the ratings themselves. As a result of the eurrent modification, men will speeialize in one phase of a general rating from the time they are strikers through E-5. Construetion ratings in pay grades E-6 through E-9 are general. This means that a PO1 and above must be qualified in all the speeialties of his rating.

NEC numbers will eontinue to identify a man with a speeial skill that may not be elearly defined by his speeifie rating.

Application Procedure For Naval Intelligence Course

As of 1 January, ***Fundamentals of Naval Intelligence*** (NavPers 10728-1) will be administered by the Naval Correspondenee Course Center instead of the Naval Intelligenee Sehool. The eourse will be evaluated at 24 promotion and retirement points.

Applieations for the course after 1 January should be made on form NavPers 992 (Rev 10/54 or later), forwarded to the Naval Correspondence Course Center, Seotia 2, New York. Students who enrolled in the eourse before January will eontinue to send assignments to the Naval Intelligenee Sehool for grading.

The Naval Intelligenee Sehool will continue to administer Naval Intelligenee, NavPers 10774, evaluated at 40 promotion and retirement points.

Applieations for this eourse should be by letter addressed to: Direetor, U. S. Naval Intelligenee Sehool, U. S. Naval Reeeiving Station, Washington 25, D.C.

WHAT'S IN A NAME

Heroic Four-Stacker

Among the outstonding deeds of mercy ond heroism which add lustre to the record of the United Stotes Novy wos the rescue of 482 of the crew ond passengers of the French military tronsport *Vinh-Long*. This wos occomplished by the commanding officer and crew of USS *Boinbridge* (DD 246) in the Seo of Mormoro, Turkey, on 16 Dec 1922.

On thot dote, *Vinh-Long* was making passoge from Bizerte to Constontinople (now Istonbull, carrying the families of French officers and a large quantity of ammunition which was intended for French bottleships. In the stern of the transport a fire of undetermined origin hod broken out, which wos moking considerable headway. *Boinbridge*'s OOD spotted *Vinh-Long* ond seeing the smoke, the coptoin, LCDR W. A. Edwords, USN, steamed his ship at full speed to pull olongside the burning ship.

Twice, *Boinbridge* was blown from the side of the burning tronsport by the force of explosions on board. Under fire from a barrage of exploding ammunition and debris, the officers and crew of *Boinbridge* clung to their task of rescuing the ponic-stricken possengers of the burning ship.

After *Bainbridge* had been blown a ship's length from *Vinh-Long*, there was one last desperote solution to the problem of remaining alongside. Edwards ordered full speed ahead on his ship, rommed the tronsport, ond wedged the destroyer's knifelike bow into the side of the doomed vessel.

From this vantoge, securely locked in the goping hole of *Vinh-Long* which he hod mode, the coptoin of *Bainbridge* directed the work of rescue. In the gothering down,

oided by the illuminotion from the burning ship, the smoll boots of the Americon destroyer scoured the surrounding woter ond picked up scores of men, women and children who had leoped over the side. Meonwhile, the remoining passengers, crew and officers still on board were led to sofety. Of a totol of 495 on boord, 482 were rescued by *Boinbridge*.

LCDR Edwords was presented the Medal of Honor for heroism in the rescue mission by President Coolidge ot the White House on 2 Feb 1924.

Boinbridge went on to escort convoys in the Atlontic throughout World War II. She wos oworded a battle stor for her European - Africon - Middle Eostern Compoign Medal.

On 21 Jul 1945, the 25-yeor-old 1190-ton four-stocker wos decommissioned in the Philodelphia Novy Yard.

Announcement of Latest Changes In Rating Structure

Four more emergeney service ratings have been disestablished, and two general serviee ratings have been made "general ratings" to streamline the Navy's rating strueture.

The emergeney service ratings going out are: *Torpedoman's Mate T* (Steam/Mechanical Torpedoes), *Torpedoman's Mate E* (Speeial/ Eleetrie Drive Torpedoes), *Engineman D* (Diesel Engineman) and *Engineman G* (Gasoline Engineman). They have been disestablished at all pay grades.

Under the other ehange, whieh is mainly an administrative one, *Torpedoman's Mate* (TM) and *Engineman* (EN) are now general (instead of general service) ratings.

Even Your Enlistment Contract Goes Modern

Enlistment contraets have been modernized. Since 1 Dee 1958 all ships and stations in the Navy have been using a new enlistment contraet, NavPers 601-1 (Rev. 2-58).

This new form is completely revamped, and provides more information for use in our modern PAMI data processing maehines, and makes the typing job easier for personnel men, yeomen and reeruiting personnel.

Forms and Publications Supply Distribution points now have a supply of the new enlistment eontract. More information about the new form, together with instruetions for filling it out is in BuPers Notice 1085 of 30 Oet 1958.

It's Time to Take Care of Unfinished Business Like 'Item 17'

AT ONE TIME OR ANOTHER, every member of the Navy has filed a Record of Emergency Data (DD Form 93-1). And most have made an entry in "item 17" designating a beneficiary or beneficiaries for unpaid pay and allowances. But have you ever wondered just what this term "unpaid pay and allowances" means?

If you shrug your shoulders and say that it comes to only a few days' pay that has built up on the books since last payday, you could be wrong—especially if you haven't given due consideration to the beneficiary designated in item 17.

These unpaid pay and allowances don't stop with the pay record items of basic pay, BAQ, BAS, S&FD, incentive pay, special pay, etc., which you have not yet received. They go beyond that. They include per diem, travel, transportation of dependents, transportation of household goods claims, checks not negotiated by you before your death, *and savings deposits and any interest which these deposits have earned.*

As you can see, if, at the time of a serviceman's death, he's entitled to any or all of these items, it comes to more than just a few days' pay.

For quite some time the Navy Finance Center has included savings deposits in the settlement of arrears of pay due at death. BuPers Inst. 1760.15A, paragraph 4a, and the *Manual for Casualty Assistance Calls Program* (NavPers 15879A Rev. August 1957), Chapter V, Section 3, page V-1, clearly indicate that savings deposits are included in unpaid pay and allowances.

Why should this fact about savings deposits be pointed out? It could mean quite a bit to your dependents. Take the case which involved an Air Force master sergeant. He had executed a DD Form 93 designating his brother as the sole beneficiary to receive his unpaid pay and allowances.

Two months later he wrote a will which bequeathed to his sister, in trust for his minor daughter, "all funds held in Soldiers' Deposits, all bank deposits, negotiable papers, and cash of which I am possessed."

Upon his death, and before final settlement of his unpaid pay and allowances, the Accounting and Finance Center of the Air Force submitted the matter to the Comptroller General of the United States. In this decision, the Comptroller General ruled that savings deposits and interest are included in the amount of "unpaid pay and allowances."

This came to a tidy sum. Payment of the arrears of pay, which included his savings deposit of $11,500 (and interest of $986.12) was paid to the sergeant's brother. The young daughter was out of luck.

Maybe you don't have this much in Navy savings. But the yarn does bring out one major point. The armed forces have no alternative but to pay whatever Navy savings deposits you have to the beneficiary or beneficiaries designated by you in item 17 on your DD Form 93-1. This is in accordance with Public Law 147, 84th Congress, approved 12 Jul 1955.

You might also take note that there is a difference in the method of determination of entitlement to arrears of pay (unpaid pay and allowances) and death gratuity.

Public Law 147, 84th Congress, approved 12 July 1955 (69 *Stat* 295) specifies the order of precedence in which arrears of pay will be paid:

• To the beneficiary or beneficiaries named to receive any such amount in a written designation

HOW DID IT START

Hammocks

Long before the days of habitability, of individual reading lamps, and foam rubber matresses, a man enlisting in the Navy was issued a hammock. It was up to the man to keep it clean and haul it around with him on every transfer. He slung it every night and took it down every morning.

In the "Old Navy" there was only one way to lash and stow a hammock properly. Here is how it was done:

One part of the gear was a hammock lashing. This was a piece of 12-thread manila rope, one end of which was eye-spliced and the other end whipped. Blankets were laid in neat folds in the center of the mattress and the edges of the hammock drawn together, making sure that the skin of the hammock was smooth.

The loop of the lashing was hauled taut around the head of the hammock with no bedding showing. This loop was counted as the first turn, then six others were taken with marline hitches at equal distances apart. After the seventh, or foot turn, similarly taken around the end of the hammock (without bedding showing), a round turn was taken about the foot. The end of the lashing was neatly tucked along the belly of the hammock. All turns had to be taut and the hammock stiff with a smooth skin.

One end was unhooked. Then, with the hammock held under his arm—and off the deck—clews were well twisted and tucked neatly under the lashing along the belly, while the end of the hammock was hauled taut and beaten well down. The other end was handled in the same manner. If it was improperly lashed, it had to be done again. If it was done correctly, it was stowed in the netting.

In stowing hammocks, each division had a netting. There was a man who had the title of "hammock stower" who was in the netting at reveille to arrange the hammocks in order by the men turning them in.

Men with hammocks properly lashed went to their nettings and passed the hammocks to the stower who stowed them with their numbers up and out.

After late sleepers had turned in their hammocks, hammock cloths were stopped down for the day. And the only way anyone could get into them was by permission from the Officer of the Deck.

Ten minutes was considered ample time from reveille (or late sleepers) until all hammocks were stowed and hammock cloths hauled down. If you went past this allotted time, you were put on the report.

executed by the member.

• If there be no such designated beneficiary, to the widow or widower of the member.

• If there be no beneficiary or surviving spouse, to the child or children of such member.

There are no restrictions as to whom you may designate as beneficiary or beneficiaries to receive unpaid pay and allowances. But once your designation has been made it is binding until superseded by a later designation.

From this, you can see that you may unwittingly designate an individual (relative or non-relative) in item 17 on DD Form 93-1, and stop your wife from receiving payment of unpaid pay and allowances due at your death. This, however, differs from payment of death gratuity.

Title III of Public Law 881, 84th Congress, approved 1 Aug 1956 (70 *Stat* 868) specifically provides that the death gratuity (six months' basic pay plus special and incentive pay) will be paid in the following order of precedence:

• Spouse.

• Children in equal shares.

• Your parents or brothers or sisters—WHEN DESIGNATED BY YOU—your parents in equal shares, and lastly your brothers and sisters in equal shares.

In the case of death gratuity, payment to your spouse is provided for regardless of whether or not you make a designation in item 16 of DD Form 93-1. The surviving spouse cannot be precluded from receiving the death gratuity payment. Payment can be made to the beneficiary or beneficiaries (limited to parents or brothers or sisters) designated in item 16, *only* when there is no surviving spouse or children.

In brief, you should be aware of the fact that:

• Unpaid pay and allowances due at death include savings deposits.

• Payment of unpaid pay and allowances (arrears of pay) due at death is payable to the person designated in item 17 of DD Form 93-1 *regardless of who that person is,* and is NOT automatically paid to your spouse or children. Payment to spouse or children is made only when you fail to designate a beneficiary or beneficiaries in item 17.

• Payment of the six months' death gratuity is automatically paid to your spouse or children, and is paid to persons designated in item 16 *only* in the event there is no surviving spouse or children.

Remember those old adages: "No time like the present," and "Don't put off until tomorrow. . . ."

Guam Crowns New Champs as Navy 'Spinner Winner'

Hula hoops may have swept the mainland, but on the Island of Guam there's another fad that's becoming the "number one" pastime for Navymen.

Here's a report on this new form of recreation which appeared in the "Crossroad," the station newspaper published by COMNAVMARIANAS for naval and Civil Service personnel on Guam:

Often in the cool calm of a damp Guam evening, the lights in Quonset Three atop Nimitz Hill are bright. And, if you turn a keen ear, you might hear a few "oooooohs" and ahaaaas," plus the muffled whirl of a spinning thumb tack.

A hush falls over the room as each contestant waits anxiously, watches the clocktimer and then steps into the 'arena' to give his tack a chance at championship honors—a spin that must last over 57 seconds.

Tack spinning is becoming so popular that it is threatening to replace other traditional island sports, say some tack spinning officials. The sport is simple, inexpensive and highly recommended for the development of strong finger muscles.

Entering competition is relatively simple, the only requirement being the possession of a common, household thumb tack. Using forefinger and thumb (or any other convenient grip), the tack is then "put into spin" on some type of slick surface, preferably metal or glass.

Finding a "winning spinner" who might some day qualify for championship honors often requires long, tedious hours of selective searching for not "just any old tack" is a good spinner.

One tack enthusiast, Navy photographer T. F. "Spinner" Powers, claims to have spent close to a dollar, and some two-and-one-half hours of unproductive searching, before he finally found a tack that spun him to within two seconds of championship honors.

The current champion is LT R. P. Davidson, USN, who was officially timed at 57 seconds. Second place honors go to Dr. H. E. Allen, IGY physicist. Both of these champs have broken the Nimitz Hill record of 52 seconds that was held by Mike "Whirl" Ward, PH3, USN.

Of course, there are rules that every tack spinner must follow. Briefly, they are:

• All tacks must remain on the selected spinning surface throughout the spin.

• At least two contest officials must be present at the time of a qualifying spin for the championship.

• Each record-setting tack will be placed on public display at a designated place with its spinning time and owner's name stated nearby.

• A tack must be spun on its point.

• Time for each spin must be kept by an official timer (only electric timers or stop watches will be used).

• Entrants must qualify before entering. (Qualifying time is at least 40 seconds.)

"Wanna Whirl!!!??" . . .

—J. A. Williams, JO1, USN.

Over One Thousand Navymen Wear New Stars as Master and Senior Chiefs

More than 1000 Navymen—the first to be selected for the new E-8 and E-9 pay grades—are now wearing stars of master and senior chiefs.

Altogether, 1073 CPOs were chosen—149 for master chief (E-9) and 924 for senior chief (E-8). Aviation Machinist's Mates, with eight of them picked for E-9 and 61 for E-8, led all the rates selected.

Five Waves were chosen—two for senior chief yeoman and one each for senior chief storekeeper, personnel man and aerographer.

The master chief's rating badge, in case you haven't seen one yet, has two stars above the regular CPO insignia. Senior chiefs wear one star above the regular CPO crow (see ALL HANDS centerspread, October 1958).

When the new rates are spelled out they will be the same as the regular E-7 titles, except for the word "master" or "senior" preceding the word "chief." When used in abbreviated form the letter M for master or S for senior will follow the usual CPO abbreviation. For example, a Boatswain's Mate at the E-9 level would be a Master Chief Boatswain's Mate (BMCM). At the E-8 level he would be a Senior Chief Boatswain's Mate (BMCS). So, put a C and an S or M after the letters in parentheses below and you have the right abbreviation.

Here are the first selections.

Rating	Number Selected E-8	E-9
Aerographer's Mate (AG)	6	1
Air Controlman (AC)	9	1
Aviation Boatswain's Mate (AB)	9	1
Aviation Electrician's Mate (AE)	21	3
Aviation Electronics Technician (AT)	39	5
Aviation Fire Control Technician (AQ)	5	1
Aviation Guided Missileman (GF)	2	1
Aviation Machinist's Mate (AD)	61	8
Aviation Ordnanceman (AO)	15	2
Aviation Storekeeper (AK)	8	1
Aviation Structural Mechanic (AM)	34	5
Boatswain's Mate (BM)	40	7
Boilermaker (BR)	3	0
Boilerman (BT)	28	4
Builder (BU)	5	1
Commissaryman (CS)	32	4
Communications Technician (CT)	15	2
Construction Electrician ICE)	3	1
Construction Mechanic (CM)	3	1
Damage Controlman (DC)	10	1
Dental Technician (DT)	6	1
Disbursing Clerk (DK)	6	1
Draftsman (DM)	2	1
Electrician's Mate (EM)	38	6
Electronics Technician (ET)	30	4
Engineman (EN)	37	5
Equipment Operator (EO)	5	1
Fire Control Technician (FT)	16	2

"But sir! . . . . these are hand-painted."

Rating	Number Selected E-8	E-9
Guided Missileman (GS)	2	1
Gunner's Mate (GM)	26	4
Hospital Corpsman (HM)	42	6
Instrumentman (IM)	0	1
Interior Communications Electrician (IC)	13	2
Journalist (JO)	2	1
Lithographer (LI)	1	1
Machine Accountant (MA)	3	1
Machinery Repairman (MR)	7	1
Machinist's Mate (MM)	47	7
Mineman (MN)	2	1
Molder (ML)	1	1
Musician (MU)	4	1
Nuclear Weapons Man (NW)	3	1
Opticalman (OM)	1	1
Parachute Rigger IPR)	4	1
Patternmaker (PM)	1	1
Personnel Man (PN)	15	2
Photographer's Mate (PH)	7	1
Photographic Intelligence-man (PT)	1	1
Quartermaster (QM)	14	2
Radarman (RD)	23	4
Radioman (RM)	47	8
Shipfitter (SF)	22	3
Ship's Serviceman (SH)	14	3
Signalman (SM)	13	2
Sonarman (SO)	13	2
Steel Worker (SW)	1	1
Steward (SD)	16	2
Storekeeper (SK)	27	4
Surveyor (SV)	1	1
Torpedoman's Mate (TM)	12	2
Tradevman (TD)	5	1
Utilities Man (UT)	2	1
Yeoman (YN)	42	6

Latest List of Motion Pictures Scheduled for Distribution To Ships and Overseas Bases

The latest list of 16-mm. feature movies available from the Navy Motion Picture Service, Bldg. 311, Naval Base, Brooklyn 1, N. Y., is published here for the convenience of ships and overseas bases. The title of each picture is followed by the program number.

Those in color are designated by (C) and those in wide-screen processes by (WS). Distribution began in November.

The Fly (1195)(C)(WS): Drama; Al Hedison, Patricia Owens.

China Doll (1196): Drama; Victor Mature, Lili Hua.

Tarzan's Fight for Life (1197)(C): Melodrama; Gordon Scott, Eva Brent.

Kings Go Forth (1198): Drama; Frank Sinatra, Tony Curtis.

A Certain Smile (1199)(C)(WS): Drama; Rossano Brazzi, Joan Fontaine.

She Played With Fire (1200): Melodrama; Jack Hawkins, A. Dahl.

The Snorkel (1201): Melodrama; Peter Van Eyck, Betta St. John.

Stagestruck (1202)(C): Drama; Henry Fonda, Susan Strasberg.

Fiend Who Walked the West (1203)(WS): Western; Hugh O'Brien, Robert Evans.

Rockabye Baby (1204)(C): Comedy; Jerry Lewis.

Hell Canyon Outlaws (1205): Western; Dale Robertson.

The Decks Ran Red (1206): Drama; James Mason, Dorothy Dandridge.

The Hunters (1207)(C)(WS): Melodrama; Robert Mitchum, Robert Wagner.

The Fear Maker (1208): Drama; Dana Andrews, Dick Foran.

Andy Hardy Comes Home (1209): Comedy-Drama; Mickey Rooney, Pat Breslin.

Twilight For the Gods (1210)(C): Drama; Rock Hudson, Cyd Charisse.

Also available, but not previously announced, are:

Hell's Five Hours (1176): Melodrama; Stephen McNally, Colleen Gray.

Spy in the Sky (1177): Drama; Steve Brodie, Sandra Francis.

Walk into Hell (1178)(C): Drama; Francoise Christophe.

Answers to Your Questions on Navy's Proficiency Pay Program

MANY POCKETS are already jingling as a result of the newly inaugurated proficiency pay program. Approximately 1400 chief petty officers began receiving an increase in November, while 1400 more will get the $30 additional monthly increase this month.

In addition to these 2800 chiefs, about 16,775 first, second and third class petty officers will get the additional $30 proficiency pay boost before 1 July.

(See page 42 in the December '58 issue of ALL HANDS for a breakdown of the number of personnel in each pay grade that will receive pro-pay during Fiscal '59.)

Although a number of petty officers are already receiving this proficiency pay, many Navymen are still puzzled or in the dark about this new system. Every day you hear such questions as:

- *"What is pro-pay?*
- *"Who is entitled to it?*
- *"Now that I'm getting proficiency pay, will I lose it if I'm promoted or transferred?*
- *"Do I have to requalify for this additional pay each year?*
- *"Does pro-pay count toward retirement or retainer pay."*

To answer these and any other questions that may arise, here's a detailed rundown on the Navy's Enlisted Proficiency Pay Program:

The Career Compensation Act of 1949, as amended by Public Law 85-422 (commonly called "the new pay bill"), authorized the armed forces to award certain enlisted personnel with proficiency pay. This new pay bill provided two methods for the payment of proficiency pay.

The first plan, known as **The Proficiency Pay Method,** authorized the advancement of career personnel with critically needed skills and leadership qualifications to any higher enlisted pay grade—without an actual advancement in military rank—but with the pay, allowances and special or incentive pay of the higher grade, based upon his years of service for pay purposes.

Under this plan, a third class petty officer for example, could draw the pay and allowances of a second or first class petty officer, or even that of a CPO.

The second alternative, **The Proficiency Rating Method,** authorized designated, deserving personnel to be paid proficiency pay in accordance with one of three established proficiency ratings. These ratings established a maximum monthly payment of $50 for the P1 proficiency rating; $100 for P2, and $150 for P3.

Thus, under the second method of awarding proficiency pay, a third class petty officer, or any petty officer for that matter, Could draw in addition to his regular basic pay and allowances, a maximum of $50, $100 or $150 per month, depending upon the proficiency rating (P1, P2 or P3) he was assigned.

Although these two methods of awarding proficiency pay were authorized by the new pay bill, the law stated that proficiency pay shall be administered under regulations prescribed by Secretary of Defense.

After a thorough study of the recommendations submitted by each of the armed forces, the Secretary of Defense decided that:

1. The **Proficiency Rating Method** of awarding proficiency pay (the second alternative described above) would be used.

2. Only the P1 proficiency rating, limited to $30 instead of the authorized $50 maximum, would be granted during fiscal '59.

3. At least 85 per cent of all proficiency payments awarded in FY 59 must go to personnel in critical military skills.

In carrying out the decisions of the Secretary of Defense, VADM H. P. Smith, USN, Chief of Naval Personnel, established the following policy which governs the awarding of proficiency pay within the Navy:

- Proficiency pay will be allocated among Navy enlisted members, including TARs, in all ratings on active duty in accordance with the actual status of the rating as to training investment (length of formal training and percentage of personnel requiring such training); shortage (difference between requirements and on-board); and first term reenlistment rate.
- Members to receive proficiency pay will be designated from a combination of their performance factors and the results of service-wide competitive examinations administered annually in November. These examinations will be based on professional qualifications and will be separate from military advancement examinations.
- Members receiving proficiency pay shall be assigned and utilized in the skill on which proficiency pay is based.
- Members drawing proficiency pay must requalify annually.

Eligibility:—To be eligible to

These Ratings Will Get Big Percentage of Pro Pay

Here's the list of the critical ratings (announced in BuPers Inst. 1430.12) which will receive at least 85 per cent of all proficiency payments awarded in FY '59:

AC	DM	IC	PT
AE	EM	JO	QM
AG	EN	MM	RD
AM	ET	MR	RM
AQ	FT	NW	SM
AT	GF	OM	SO
CT	GS	PH	SV
TD			

All ratings not listed are classified as "outstanding effectiveness ratings" and will receive the remaining 15 per cent of the authorized proficiency awards.

This list of critical ratings is subject to change in accordance with guidelines established by the Secretary of Defense.

F. Mercado, SKSN, USN

"'Boats' seems to be in an ugly mood today."

compete for proficiency pay or annual requalification you must be serving in a billet requiring the technical skill of your particular rating. Personnel in training for and serving in special programs such as the nuclear power program and those attending schools for the specific purpose of advancing their state of training in their own rating are considered to be serving in such a billet.

In addition to serving in a billet requiring the technical skill of a particular rating, you must also:

- Be serving in pay grades E-4 through E-9. (Pay grades E-8 and E-9 will not be eligible for proficiency pay in FY '59.)
- Have a minimum of six months' continuous active service immediately before the terminal eligibility date established for each proficiency examination.
- Be recommended by your commanding officer.
- Pass the service-wide proficiency examination with a sufficiently high score to come within prescribed allocations for each rate.

Completion of Navy Training Course, practical factors and performance tests for higher military rate is not mandatory for FY '59, but is recommended. Since military advancements are paramount, commanding officers will consider these factors when recommending candidates for proficiency pay.

To be eligible to compete for proficiency pay in FY '60 (1 Jul 1959—30 Jun 1960) and thereafter, you will be required to complete the Navy Training Courses, practical factors and performance tests for the next higher military rate.

Only outstanding personnel will be recommended for proficiency examinations. During the remainder of FY '59, an average of about 10 per cent of the total petty officers in the critical ratings and two per cent of those in the outstanding effectiveness ratings (see accompanying box) will receive proficiency pay.

COs have been advised to recommend no more than 50 per cent of the personnel assigned in each critical rate and no more than 10 per cent of those assigned in each outstanding effectiveness rate.

These percentages may be exceeded, however, when the command has been assigned a specific task which has required the assignment of personnel who have been specifically chosen for their particular proficiency or special training, and when the applied percentage above would result in less than one nominee.

If this is the case, one candidate may be recommended.

The names of those individuals who have successfully passed their proficiency pay exams and will be awarded proficiency pay will be announced by the Examining Center in the same manner as E-4 through

WAY BACK WHEN

Navy on Lake Erie

"We Have Met the Enemy and They Are Ours."

Nowadays, most of us think of the Navy as a globe-trotting, salt-water outfit, but in the past, some of the Navy's most famous combat actions have taken place on fresh water right in America's own back yard.

One of these battles was fought on Lake Erie during the War of 1812, when the movement of British forces in the Great Lakes area posed a real threat to the settlements on what was then America's frontier.

The story of the battle began in March 1813, when 27-year-old Lieutenant Oliver Hazard Perry arrived at Presque Isle (now Erie), Pa., to become commodore of a fleet then being built to wrest control of the lake from the enemy. Wood for the ships came from forests nearby. Anchors, guns and other gear that couldn't be made locally had to be brought in overland, as did most of the sailors who were to man the ships and many of the workers who helped build them.

Through the spring and summer of 1813 the Americans struggled to put together their fleets—three brigs, five schooners and a sloop. At the same time, the British commander on the lake, Robert H. Barclay, who had served under Nelson at Trafalgar, was assembling his force of six ships.

In a broadside, the guns of the American ships could fire twice as much weight as the British guns could. However, the British had a considerable advantage in range.

The Americans had their ships ready first, and on 6 Aug 1813 Perry sailed for the western part of the lake. He established himself at Put-in-Bay in the Bass Islands, where he was in position to flank the enemy's communications and to keep an eye on any movements the British fleet might make out of its base at Malden, on the Canadian side. Thus, the enemy faced a situation where he had to defeat Perry or lose control of the lake.

The battle came on 10 Sep 1813, when the British came out of Malden and the Americans sailed to meet them. (Perry's flagship, USS *Lawrence*, was flying the famous "Don't Give Up the Ship" flag which is now displayed at the U. S. Naval Academy.)

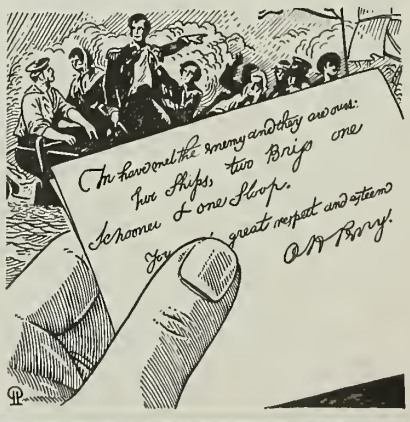
In the early part of the fight, *Lawrence* bore the brunt of the battle. She slugged it out with the enemy's three most powerful ships, *Detroit*, *Queen Charlotte* and *Hunter*, until according to Perry:

"Every brace and bowline being shot away, she became unmanageable, notwithstanding the great exertions of the sailing master. In this situation she sustained the action upwards of two hours within canister distance, until every gun was rendered useless, and the greater part of her crew either killed or wounded."

Because *Lawrence* was practically done for, Perry boarded a small boat and made his way under fire to USS *Niagara*, so that he could transfer his flag and continue the fight. He sailed back into the thick of things. The small craft on both sides joined in and, finally, after a battle which had lasted three hours and 15 minutes from start to finish, the British were forced to surrender.

As a result, Perry was able to report to General William Henry Harrison, the top military commander in that theater of operations: "We have met the enemy and they are ours—two ships, two brigs, one schooner and one sloop."

Soon after his victory, Perry began transporting Harrison's army across the lake to intercept British ground forces which now had to abandon northwestern Ohio, Detroit and Malden. At the Battle of the Thames, on 5 Oct 1813, Perry contributed to another American victory by personally leading a cavalry charge.



E-6 advancements are authorized.

Now that you know the eligibility requirements concerning proficiency pay, you should also know how you can lose it. COs may revoke your proficiency pay under the following circumstances:

- If a man fails to requalify on his next proficiency examination. In such case, pay will be stopped one year from the date that it was awarded.
- If, in the opinion of the CO, the man receiving pro pay fails to maintain the required degree of proficiency.
- If a man changes his rating, unless he's found to be eligible for proficiency pay in the new rating. Requests will be submitted to the Chief of Naval Personnel for individual determination in such cases.
- If the recipient fails to reenlist on board within 24 hours following discharge or does not extend his enlistment. Proficiency pay will be revoked one day before the expiration of his active duty obligated service, or on the date of his transfer for separation, whichever is earlier.
- If he is reduced in rate. However, proficiency pay may not in itself be revoked as a punitive measure.
- If a man receiving pro pay is reassigned to any duty not requiring the skill on which the pay is based, including permanent assignment to a course of instruction outside the skill. This provision, however, does not apply if he is:

Transferred to a course of instruction where such training is for conversion to one of the critical ratings.

Transferred for training for, or serving in, a special military program, such as the nuclear power program.

Given additional duty assignments not materially interfering with performanee of his principal duties.

Assigned to temporary or special duty not exceeding 90 days.

Assigned temporary duty or temporary additional duty while attending courses of instruetion.

In a transient status.

On authorized leave.

Hospitalized for disease or injury not resulting from misconduct. Even if hospitalized, he may continue to draw proficiency pay for the remainder of the eligibility period but, in any event, for no longer than 12 months.

If you are advanced in military grade, you will still be entitled to receive profieieney pay, but you will be subject to normal requalifieation and revocation as outlined above. If, for example, you were an ET3 drawing proficiency pay as an ET3-Pl effective 1 Jan 1959, and you take the exam for ET2 in February and are advanced on 16 May 1959, you will draw proficieney pay as an ET2-Pl. This profieiency pay will, however, be stopped on 31 Dec 1959 unless you requalify for ET2-P1 pay in the November '59 exams.

If you are drawing proficieney pay and you reenlist on board your permanent duty station, your reenlistment will be effected in the military rate held at the time of discharge. You will, however, continue to reeeive the same rate of proficiency pay you were entitled to when discharged for reenlistment. Your reenlistment bonus or payment for unused leave will be figured on your basic military and WILL NOT include your proficieney pay.

Former Navymen who were in a proficieney pay status at the time of discharge or separation and who subsequently reenlist, irrespective of continuous service, must requalify for proficiency pay again before they are entitled to start reeeiving it again.

Retired personnel and members of the Fleet Reserve are eligible for proficiency payments while serving on extended active duty and are eligible in accordanee with the requirements outlined above.

If a person is drawing profieiency pay at the time he becomes eligible for transfer to the Fleet Reserve, his proficieney pay will be stopped one day before the expiration of his active duty obligation or upon the date of his transfer for separation. Proficiency pay has no effeet whatsoever in computing retired or retainer pay. Only basic pay is used when figuring retainer/retired pay.

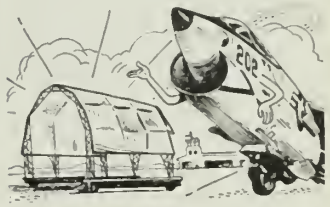
The Navy's plans for implementing P2 and P3 profieieney ratings will be announced at a later date and will be covered in a future issue of ALL HANDS.

The subject of implementation of proficieney pay and related matters are eovered in BuPers Inst. 1430.12.

HERE'S YOUR NAVY

At the El Centro, Calif. Naval Air Auxiliary Station, the problem was the desert sun and how it heated the metal skins of planes. This made the job of working on aircraft almost impossible during daytime in the summer months. The answer proved to be a portable nose hangar.

The task of designing and supervising the construction fell to CWO R. L. Moore, Maintenance Officer in the Operations Office. Most of the actual construction work was done by

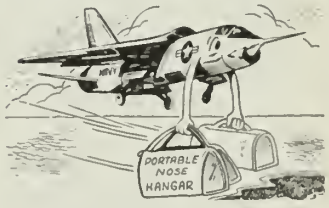


C. Watson, PRM3, J. L. Turner, PRM3, G. J. Roof, AM3, F. J. Rogers, AM1 and W. W. Kelly, AD2.

The hangar they came up with is composed mainly of salvage materials and the only part actually purchased was the canvas. The frame that houses the aircraft was made of two banner bars. The base frame was made from three "L" frame engine stands. The wheels were obtained from Alameda.

The nose hangar, which collapses into three relatively small packages, is easily taken apart and put back together. This makes it an ideal piece of equipment for use at advanced bases.

It can be used to accommodate the F8U and F3H, the largest carrier-



based jet fighters. Although it hasn't been tried on A3D- or A4D-type aircraft as yet, it is anticipated that the hangar is big enough to take care of these, too.

Work on the hangar started in July and ended in October. It took three months for the canvas covering to arrive, but only about four weeks to complete the framework and but one-and-a-half weeks to sew the canvas into the desired shape.

There have been many suggestions that may be incorporated into the hangar nose in the near future.

Are You in One of the Crowded Ratings? This Info Is For You

IF YOU'RE IN ONE OF SEVEN ratings considered in excess of requirements and figure that you're just withering away on the vine, don't give up hope. Special consideration is being granted so you can change to any of the 16 ratings where shortages exist.

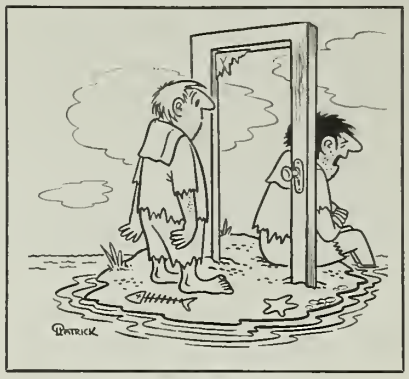
There are two ways you can do this; by going to school or by taking "in-service" training. The ratings authorized to make the change are: BM, GM, MN, CS, AD, AO and SD.

To help you prepare for a change in rating, school training (normally at the Class "A" level) will be provided. To be eligible you must:

- Be a volunteer for one of the ratings where shortages exist.
- Be in one of the excess ratings.
- Fulfill the necessary obligated service requirements.
- Meet the required test score requirements.
- Be recommended by your commanding officer.
- Meet the security clearance requirements for the school concerned.

If you are an E-4 or E-5 and ordered to school under BuPers Inst. 1440.18B, you should have it made. Your rating will be changed in equal pay grade upon successful completion of the course of instruction.

Those in pay grade E-6 and E-7 will not have their ratings changed after completing the course. They will be required to take further in-service training but will be identified by a new primary NEC. As an example, a GM1 in in-service training for change to RD1 would be assigned an NEC Code (RD-0300).



"Who's there?"

In-service training calls for these eligibility requirements. You must be:

- A volunteer for one of the ratings where shortages exist.
- In one of the excess ratings.
- Recommended by your commanding officer.

Like the GM1 changing to RD1, your primary NEC Code will be changed to the one for which you are being trained. When your commanding officer considers you to be qualified, he will request an examination for you. This also stands true for those in pay grades E-6 and E-7 whether or not they go to school.

Although the SD rating is considered in excess, the TN, TA and TR rates remain in short supply. Changes from TN, TA and TR rates are not desirable and may not be approved.

Here is a run-down on the ratings and the number considered in excess who may be changed in rating during fiscal years 1959 and 1960:

RATING	E-4	E-5	E-6	E-7	TOTAL
BM	0	200	500	0	700
GM	50	50	100	0	200
MN	0	0	25	0	25
CS	0	200	100	0	300
AD	0	0	500	100	600
AO	0	0	100	100	200
SD	500	500	500	300	1800

These are the ratings in which shortages exist which may be filled by conversion from ratings in excess during the fiscal years 1959 and 1960:

RATING	E-4	E-5	E-6	E-7	TOTAL
QM	200	200	0	0	400
SM	300	300	100	100	800
RD	100	200	50	50	400
SO	100	100	50	50	300
TM	100	0	0	0	100
ET	300	200	0	0	500
RM	1000	1000	300	200	2500
CTM	0	120	100	0	220
CTR	200	200	300	0	700
IC	100	50	150	50	350
AT	600	600	200	0	1400

RATING	E-4	E-5	E-6	E-7	TOTAL
AQ	0	50	0	0	50
OM	25	0	0	0	25
NW	100	50	0	0	150
UT	50	25	0	0	75
TD	75	0	0	0	75

If you're in the excess group and want to change your rating to one of those in which shortages exist, this listing of schools available for conversion training should help.

Rate	Eligible personnel	Schools	Approximate school length	Obligated service	Requirements (Security clearance for some individual schools are required.)
AQ	Pay grade E-5. All source ratings	AN class "P" AQ class "A"	24-28 weeks	36 months	GCT + ARI + ETST = 170 or GCT + ARI = 115 and MECH = 55. Normal color perception.
AT	Pay grades E-4, E-5, and E-6. All source ratings	AN class "P" AT class "A"	24-28 weeks	36 months	GCT + ARI + ETST = 170 or GCT + ARI = 115 and MECH = 55. Normal color perception. Clear speaking voice.
CTM	Pay grades E-5 and E-6. All source ratings	CTM class "A" (Maintenance-Electronics)	24 weeks	36 months	GCT + ARI + ETST = 170 or GCT + ARI = 115 and MECH = 55. Normal color perception. Clear speaking voice.
CTR	Pay grades E-4, E-5, and E-6. All source ratings	CTR class "A" (Radio)	24 weeks	36 months	GCT + ARI = 100. Normal color perception and hearing. Radio = 60 or demonstrated code ability.

Rate	Eligible personnel	Schools	Approximate school length	Obligated service	Requirements (Security clearance for individual school also required.)
ET	Pay grades E-4 and E-5. All source ratings	ET conversion course	24-40 weeks	36 months	GCT + ARI + ETST = 170 or GCT + ARI = 115 and MECH = 55. Normal color perception. Clear speaking voice.
IC	All source ratings	IC class "A" IC class "C" (Gyro)	26 weeks	36 months	ARI + MECH = 105 or ARI + MECH = 100 & ETST = 55. Normal color perception.
NW	Pay grades E-4 and E-5. All source ratings	NW class "A"	16-22 weeks	36 months	ARI + MECH = 105. Normal color perception.
OM	Pay grade E-4. All source ratings	OM class "A"	20 weeks	24 months	GCT + MECH = 110. Normal color perception. Minimum visual acuity 20/100, correctible to 20/20.
QM		No school established			
RD	All source ratings	RD class "A"	20-24 weeks	36 months	GCT + ARI = 105. Normal color perception. Normal near vision.
RM	All source ratings	RM class "A"	24 weeks	36 months	GCT + ARI = 100. Radio = 60 or demonstrated code ability. Normal color perception and hearing.
SM		No school established			
SO	All source ratings	SO class "A"	24 weeks	36 months	GCT + ARI = 110 & Sonar = 55 or GCT + ARI = 105 & Sonar = 55 and ETST = 55. Normal hearing and color perception. Normal near vision. Clear speaking voice.
TD	Pay grade E-4. All source ratings	AN class "P" TD class "A"	20-24 weeks	24 months	GCT + MECH = 110. Nomal color perception. Voice clear and well modulated. No speech defects or pronounced accents.
TM	Pay grade E-4. All source ratings	TM class "A"	8 weeks	24 months	ARI + MECH = 105. Normal color perception.
UT	Pay grades E-4 and E-5. All source ratings	UT class "A"	13 weeks	24 months	GCT + MECH = 100. Vision correctible 20/20 each eye.

Seabees at Port Lyautey Do Top Notch Job

The Seabees landed at Port Lyautey about 10 months ago and the Naval Air Station and adjacent facilities "serving the U.S. Navy in Morocco," haven't been the same since. In fact, they're now much better off.

Since Mobile Construction Battalion Four arrived in January '58, they have worked up to 12 hours a day, six days a week and have had their hand in the accomplishment of 23 official projects—and then some.

At the air station proper, the CBs swarmed over the area adjacent to the NAS Chapel and when the smoke had cleared, the chapel was sporting a new addition. They also added two classrooms to the elementary school, enlarged the base photo lab, made extensive repairs to the carpenter shop and gave unlimited support to the Public Works Department.

Among the many jobs undertaken by MCB 4 was the completion of the nearby Naval Ordnance Facility shop and its support elements.

While all this electrical and plumbing work was being done inside the ordnance facility, the construction drivers were engaged rebuilding and resurfacing its perimeter and access roads. They also installed a telephone cable, sidewalks, incinerator and paint locker.

At the tank farm, the Seabees did some more road work, laid an aviation gasoline pipe line and an eight-inch water line complete with four hydrant assemblies.

Meanwhile, as all this was being accomplished in the Port Lyautey area, a detachment from MCB 4 was sent to Rota, Spain, to work on a chapel and recreation building.

Along with these projects, the constructionmen found time to do a little building on their own during their spare time. These extra-curricular activities included remodeling the nursery of the Navy Wives' Club; building benches at a Moslem school; assisting in the construction of pistol and skeet ranges; and lending a hand to build a school and dormitory for a nearby mission.

Latest Summary of Navy Career Information Available to You

THE PROGRAMS AND OPPORTUNITIES that are available to you as a career Navyman are under continuing change, dictated by the needs of the Navy. Although the basic information concerning your service advantages, opportunities and benefits appears in manuals, regulations, or notices, you may not have received the word. Normally the directives covering career opportunities are in your ship or station personnel office.

Here's a list of up-to-date directives dealing with career opportunities and programs available to officers and enlisted men, classified according to subject matter. It supersedes the list presented in the May 1958 ALL HANDS, pp. 50-52.

Remember, notices are canceled, instructions modified and manuals changed, so check with the personnel man to get the latest word.

Subject	Pertinent Directives or Authority
ADVANCEMENT OR CHANGE IN RATE OR RATING	
GENERAL PROGRAMS	
Advancement in Rate/Ratings:	
Policy:	BuPers Inst. 1430.7C, *BuPers Manual*, Part C, Chap 7, Sec 2
Qualifications:	*Manual of Qualifications for Advancement in Rating*
Eligibility:	BuPers Inst. 1414.3B
Naval Reserve:	BuPers Inst. 1430.1B
Program for Adjustment of the Enlisted Rating Structure Through Formal School Training and Through In-Service Training; establishment of	BuPers Inst. 1440.18B
Changes in Rate & Rating	BuPers Inst. 1440.5B
Advancement to E8 & E9	BuPers Inst. 1430.11
Training Publications for Advancement in Rating	NavPers 10052
APPOINTMENT TO COMMISSIONED GRADE	
NAVAL ACADEMY, FLIGHT TRAINING, OCS	
Naval Preparatory School	*BuPers Manual*, Art. C-1203
Aviation Cadet Training Program; eligibility, procedures for applying	BuPers Inst. 1120.20A
Officer Candidate School Program for Enlisted Members of the Naval Service on Active Duty; policy, eligibility	BuPers Inst. 1120.29
SPECIAL PROGRAMS	
Appointment to Commissioned Grade Integration and LDO Programs, Appointment to Warrant Grade; information concerning	BuPers Inst. 1120.18E
Nursing Education Program; information concerning	BuPers Inst. 1120.27B
Regular Navy Augmentation Program; policy, eligibility	BuPers Inst. 1120.12F
Appointment to Commissioned Grade, SDO, (LAW), 1620, policy eligibility	BuPers Inst. 1120.21
Appointment to Commissioned Grade, Optometry, Pharmacy, Medical Allied Sciences of the Medical Corps, and in Administration and Supply Sections of the Medical Service Corps, Regular Navy; policy, eligibility	BuPers Inst. 1120.8A, BuPers Inst. 1120.15C
Nomination of Qualified Enlisted Personnel for the NROTC Program; policy, eligibility	BuPers Inst. 1111.4C
Appointments to Cadetship in the USCG; policy, eligibility	BuPers Inst. 1111.7

Subject	Pertinent Directives or Authority
TRAINING	
GENERAL TRAINING	
Enlisted Training Schools and Courses; policy, quotas, legibility for enrollment	BuPers Inst. 1500.25E, *Catalog of U. S. Navy Training Activities and Courses* (NavPers 91769-C)
Information and Education Program; policy	Art. D-2103, *BuPers Manual, Information and Education Manual* (NavPers 16963-C)
Opportunities Available Through the I & E Program; information concerning	Naval Training Bulletin (NavPers 14900) Fall 1957 issue
Study Materials for Applicants for Appointment to Commissioned Status under Integration, LDO, and Warrant Officer Programs; information	BuPers Inst. 1560.12
Enlisted Correspondence Courses	*List of Training Manuals and Correspondence Courses* (NavPers 10061)
Navy Enlisted Advanced School Program & Navy Enlisted Scientific Education Program; information	BuPers Inst. 1510.69C BuPers Inst. 1430.10A
SPECIALIZED TRAINING	
Assignment and Reassignment of Personnel in the Naval Air Mobile Training Program; policy	BuPers Inst. 1306.31B
Selection and Training of Candidates for Diving Duty	BuPers Inst. 1500.15C, NavPers 91769-B
U. S. Naval School of Music; applications for courses	BuPers Inst. 1336.2C
Basic Hospital Corps School Class "A"; candidates for	BuPers Inst. 1306.55A
Assignment of Enlisted Personnel to the Nuclear Power Training Program; policy, eligibility	BuPers Inst. 1540.33A SecNav Inst. 1000.3
Tuition Aid Program; information	BuPers Inst. 1560.10A
REENLISTMENT	
Reenlistment and Voluntary Extension of Enlistment of Enlisted Personnel of the Regular Navy	BuPers Inst. 1133.1C
Reenlistment Program; information	BuPers Inst. 1133.3C
Discharge Up to 1 Year in Advance of Normal Expiration of Enlistment Date in Order to Reenlist; policy, eligibility	BuPers Inst. 1133.4A
Continuation on Active Duty of Enlisted Personnel with over 20 Years' Active Service	BuPers Inst. 1133.12A
Reenlistment in the Regular Navy of	BuPers Inst. 1130.4E

Subject	Pertinent Directives or Authority
Naval Reserve Personnel Serving on Active Duty; policy, eligibility	
Assignment to a School as an incentive for Reenlistment; policy, eligibility	BuPers Inst. 1133.5A
SPECIAL DUTY ASSIGNMENT	
GENERAL POLICY	
Training and Administration of The Naval Air Reserve; duty in; policy, eligibility	BuPers Inst. 1001.7B
Assignment and Rotation of Enlisted Women; policy	BuPers Inst. 1306.10B
Sea/Shore Rotation	BuPers Inst. 1306.21D, BuPers Inst. 1306.62A
SPECIAL ASSIGNMENTS	
Transfer and Assignment for Humanitarian or Hardship Reasons; policy, eligibility	BuPers Inst. 1306.24A
Assignment to Duty of Sole Remaining Sons; policy	BuPers Inst. 1300.11
Assignment to Naval Missions, Attaches, Military Aid Groups, Joint Staffs, SHAPE; policy, eligibility	BuPers Inst. 1306.6B
Assignment to Recruiting Duty; policy, eligibility	Art. C-5208, *BuPers Manual*, BuPers Inst. 1336.1A
Assignment to Instructor Duty; policy, eligibility	BuPers Inst. 1306.22C BuPers Inst. 1306.42
Assignment of Enlisted Personnel to Initial Submarine Training and Duty; policy, eligibility	BuPers Inst. 1540.2C
Assignment to Duty Involving Demolition of Explosives; policy, eligibility	BuPers Inst. 1320.5A
Assignment to Reserve Training Submarines; policy, eligibility	BuPers Inst. 1307.38
PAY, ALLOWANCES, INSURANCE	
Soldiers' and Sailors' Civil Relief Act of 1940; summary of benefits under	BuPers Inst. 1760.4
Uniformed Services Contingency Option Act; options under	BuPers Inst. 1750.1B
Social-Security Benefits for Military Service; summary of benefits under	BuPers Inst. 1741.10
Mortgage Insurance for Servicemen to Aid in the Construction or Purchase of Homes; policy, eligibility	SecNav Inst. 1741.4A
SEPARATION AND RETIREMENT	
Review of Undesirable and Punitive Discharges; information	BuPers Inst. 1626.16
Early Separation Of Enlisted Personnel to Attend College	BuPers Inst. 1910.12B
Retirement, Voluntary and Naval Reserve with/without Pay; policy, eligibility	BuPers Inst. 1820.1B, BuPers Inst. 1820.2A, SecNav Inst. 1811.3A,
Transfer to Fleet Reserve; deferment of	BuPers Inst. 1813.3A
MISCELLANEOUS	
GENERAL INTEREST	
The Navy Relief Society; services of	Art. C-9207, *BuPers Manual*, BuPers Inst. 1747.1A
The American Red Cross; services of	Art. C-9207 and Art. C-10308(7), *BuPers Manual*
Immigration and Nationality Act of 1952; Alien spouses, Naval personnel; information concerning	SecNav Inst. 1750.1
Marriage of USN and USMC Personnel outside the United States and within Far East Command; policy	Art. C-11109, *BuPers Manual*, SecNav Inst. 1752.2A
Visas for Alien Wives and Children of Naval Personnel; information concerning	SecNav Inst. 1750.2
Participation of Enlisted Personnel in Interservice and International Athletic Events and Competitions; policy, eligibility	BuPers Inst. 1710.1E, BuPers Inst. 1710.2
Summary of State Bonuses	BuPers Inst. 1760.3B
Uniformed Services Identification and Privilege Card, DD Form 1173; regulations governing	BuPers Inst. 1750.5A
Civilian Employment Assistance Program for Retired and Involuntarily Released Personnel	BuPers Inst. 1740.2
Your New Career; to assist career personnel by proving information for pre-retirement planning	BuPers Inst. 1740.2
PROGRAMS AND OPPORTUNITIES OF PARTICULAR INTEREST TO OFFICERS	
TRAINING	
Schools and Courses	BuPers Inst. 1500.25E, *Catalog of U. S. Navy Activities and Courses* (NavPers 91769-C)
General Line School; policy, eligibility	BuPers Inst. 1520.43A
Five-Term College Training Program; policy, eligibility	BuPers Inst. 1520.48B
Completion Naval Aviation College Program for USN Officers; policy, eligibility	BuPers Inst. 1520.38
Officer Correspondence Courses; summary	*List of Training Manuals and Correspondence Courses* (NavPers 10061)
Tuition Aid Program; information	BuPers Inst. 1560.10A
Annual Rhodes Scholarship Competition; policy	BuPers Inst. 1520.61
SPECIALIZED TRAINING	
Flight Training (HTA); policy, eligibility	BuPers Inst. 1520.20A
Underwater Demolition Training; policy, eligibility	BuPers Inst. 1520.7
Selection and Training of Candidates for Diving Duty	BuPers Inst. 1520.4D, BuPers Inst. 1500.15C
Training and Administration of The Naval Reserve; policy	BuPers Inst. 1001.10C
Nuclear Power Training Program; information concerning	BuPers Inst. 1540.33A
Assignment of Officers to Nuclear Powered Submarines	BuPers Inst. 1301.28
ASSIGNMENT TO SPECIAL DUTY	
Assignment to Submarine Duty; policy, eligibility	BuPers Inst. 1520.6G
Assignment to Special Weapons Program; policy, eligibility	BuPers Inst. 1331.1A
Assignment with a Navy Security Group; policy, eligibility	BuPers Inst. 1331.2B
Assignment to Duty Involving Demolition of Explosives; policy, eligibility	BuPers Inst. 1320.5A
Assignment to Nuclear Power Program; policy, eligibility	SecNav Inst. 1000.3
Assignment of Officers to Nuclear Powered Surface Ships	BuPers Inst. 1130.6, BuPers Inst. 1520.68
APPOINTMENT	
Appointment to Commissioned or Warrant Grade in the Reserve of the U. S. Navy of Resigned Commissioned or Warrant Officers of the	BuPers Inst. 1920.8A

Subject	Pertinent Directives or Authority
Regular Navy; information concerning	
Appointment of Naval Reserve Aviators to Commissioned Grades in Regular Navy; policy, eligibility	BuPers Inst. 1120.14A
Appointment in the Medical Corps and Dental Corps, Regular Navy; policy, eligibility	BuPers Inst. 1120.3F
Law Specialist Program for Reserve Officers of the U. S. Navy; information concerning	BuPers Inst. 1120.28
PROMOTION	
Professional Fitness for Promotion of Officers on Active Duty	BuPers Inst. 1416.1D
Professional Fitness for Promotion of Warrant Officers on Active Duty	BuPers Inst. 1416.6
MISCELLANEOUS	
Naval Reserve Officers not on Active Duty; Regulations and Procedures Governing Screening the Ready Reserve and Assignment to, Transfer Between, and Discharge from Naval Reserve Categories; policy	BuPers Inst. 1821.1A
Non-Disability Retirement of Officers and Warrant Officers; information concerning	BuPers Inst. 1811.1A
Active Duty Agreements; policy, eligibility	BuPers Inst. 1120.22B
Change of Officer Designator Codes procedure, eligibility	BuPers Inst. 1210.6A
Active Duty of Naval Reserve Officers extension of and release from	BuPers Inst. 1926.1C, BuPers Inst. 1926.2A
Voluntary Separation Policies Affecting all Officers of the Regular Navy and the Naval Reserve Except Officers of the Medical and Dental Corps	SecNav Inst. 1920.3A

Vermont Announces Rules On State Income Taxes

Navymen who are residents of the state of Vermont are "subject in full" to the Vermont income tax laws. Therefore, even if on active duty, they are required to submit yearly income tax statements.

In response to questions from service personnel, the Director of Taxes says:

"Persons who enter the Armed Forces of the United States from the State of Vermont continue to retain their Vermont residency under the provisions of the Soldiers' and Sailors' Relief Act of 1940, as amended by a Congressional Act of 1951. As residents of the state they are subject in full to the Vermont income tax law and required to submit yearly income tax statements on gross income of $500 or more just as is any resident of the state despite their geographical locations during a particular taxable year.

"The income reportable for Vermont income tax purposes is the same as that for Federal income tax purposes and returns are due and payable three and one-half months following the close of a taxable year (15 April).

"The Vermont income tax law provides for a $500 personal exemption for a taxpayer with an additional $500 exemption for his spouse and each qualifying dependent."

The tax rates currently in effect are:

If the net income is:	*The tax shall be:*
Not over $1000	Two per cent of the net income
Over $1000 but not over $3000	$20 plus four per cent of excess over $1000
Over $3000 but not over $5000	$100 plus six per cent of excess over $3000
Over $5000	$220 plus seven and one-half per cent of excess over $5000

The Vermont law allows servicemen serving on their initial enlistment to defer payment of income taxes until discharge from the service and for a period of six months thereafter. This section of the law, however, does not exempt the serviceman from filing his income tax statement each year.

Personnel other than those serving in their first enlistment are required to file a return annually and to remit payment of their taxes just the same as other state residents.

"They passed the word—Sweepers, starch your brooms."

Here Are Latest Changes On Uniform Regulations

What's the latest word you have on uniforms?

The copies of *Uniform Regulations* at your ship or station have been corrected to include recent changes. A quick check of this book should iron out any questions you might have regarding uniforms.

The changes cover the:

Authorization for Warrant Operations Technicians to wear the Warrant Boatswain's device.

Abolishment of the two-piece culotte-style gray indoor duty uniform for nurses assigned to duty aboard ship.

Deletion of mattress covers and pillow cases after 1 Jul 1959 from the minimum outfit prescribed for

F. Mercado, SKSN, USN

"Isn't that the new Disbursing Clerk?"

enlisted men other than CPOs.

Abolishment of the NROTC corps device worn by NROTC midshipmen.

Authorization for enlisted men below CPO to wear the dungaree working uniform without chambray shirt in hot weather when senior officer gives the okay.

Details on rating badges for E-8 and E-9s.

Discontinuation of the distinguishing marks for Aviation Utility, Bombsight Mechanic, Master Horizontal Bomber, Ordnance Battalion and Seaman Gunner.

Details on specialty marks for the ratings of Photo Intelligenceman, Shipfitter and Telecomm Censorship Technician.

Authorization to wear unit identifying marks bearing the identifying letters ACB to enlisted personnel below CPO who are assigned to Amphibious Construction Battalions.

Identifying insignia for enlisted women enrolled in the Nursing Education Program.

Authorization and requirements for women CPOs to wear the dark blue uniform.

Renaming of the Mine Warfare distinguishing mark to Mine Assemblyman.

Clarification of instructions on the wearing of U. S. Navy Band uniforms.

Authorization to wear the Merchant Marine World War II Victory Medal and the President's Hundred Marksmanship Award.

Description of how the Medal of Honor ribbon is to be worn with the officer's white coat.

These changes will be promulgated in future changes to *U. S. Navy Uniform Regulations.*

Navy Noisery Makes a Hit With The Whole Family

Tucked in between busy offices at Navy headquarters in the Federal Office Building, San Francisco, Calif., there's a welcome sight for Navy families on the move.

It's a door labeled "Noisery." Beyond the door once-harried mothers can leave their children in good hands while they fill out papers and complete final processing before they sail from San Francisco to be with their Navy husbands overseas.

Operated by volunteers of the Navy Officers Wives' Club of Treasure Island, the nursery is open from 0830 to 1130—the morning rush hours when 100 or more dependents are usually being processed for overseas travel. It has been in business since 1952. About 45 wives share in its operation.

While mothers are busy with boarding orders, cabin assignments and final instructions, their children are invited to the nursery, which is filled with play tables, chairs, blackboards, play pens and an ample supply of toys. For the newest members of a family, there's a small room off by itself, where there are five cribs and someone to watch over the little ones at all times.

Since it started, the nursery has been playroom or napping place for some 50,000 youngsters. At first it was hardly more than a cubby-hole, 15 feet square. Cribs were borrowed from the Navy Relief Society, and Navy wives donated toys, books and other supplies.

Now, a separate room for cribs has been added and plans are being made to redecorate and refurnish the place. As a precaution in case of an accident, insurance is carried and paid for by the Navy wives.

Originally, dependents checking into the nursery were transported eight blocks to and from the dispensary for shots, exams and xrays. Now, processing has been speeded up by having a medical team report to the Federal Building.

The nursery does a land-office business. On a normal day about 150 dependents are processed. On peak days the total reaches the neighborhood of 500. This means a total of between 1000 and 1500 adults and children per month.

The volunteer nursery mothers do their watchstanding on the busiest days. On mornings when less than 100 are processed, doctors, nurses and corpsmen from the dispensary perform temporary additional duty in the nursery and find themselves greeting newcomers and helping to fill out papers.

For the travel-weary mother going through the last few hectic hours before sailing, the "Noisery" is a real blessing. What's more, the youngsters like the place too.

The "Noisery" is just one way in which Navymen and their families help one another. Perhaps an adaptation of it might prove useful elsewhere.

As usual, ALL HANDS is glad to pass along any ideas that help the Navy take care of its own. So, if you have 'em, send 'em in.

Shipbuilding and Conversions

In the 1959 shipbuilding and conversion program for which Congress has already appropriated funds, nuclear power and guided missiles seem to be stressed. In the schedulde recently announced by the Secretary of the Navy, seven nuclear-powered submarines and 13 guided missile ships are included.

New ship construction assignments include:

- 8 Guided missile frigates (DLG) including three remaining from fiscal 1958 program)
- 1 Nuelear powered guided missile frigate DLG(N)
- 3 Nuclear-powered guided missile submarines SSG (N) including two ships remaining from fiscal 1958)
- 4 Fleet ballistic missile submarine, nuclear powered SSB(N)
- 4 Nuelear-powered attack submarines SS(N)
- 5 Guided missile destroyers (DDG)
- 37 Landing craft personnel, large (LCPL)
- 2 Patrol vessels (YP)
- 8 Open lighters (YC)
- 2 Utility landing craft (LCU)
- 4 Large harbor tugs (YTB)
- 2 Submarine repair berthing and messing barges (YRBM)
- 1 Amphibious transport, dock (LPD)
- 1 Amphibious assault ship (LPH)

Some ships are due for conversion during Fiseal 1959. They include:

- 1 Nuelear-powered attack submarine SS(N)
- 1 Attaek transport
- 1 Auxiliary submarine (AGSS)
- 2 Guided missile cruisers
- 1 Submarine tender
- 2 Seaplane tenders (AV)

SPECIAL REPORT

SHIP AND CO—*USS Rankin* (AKA 103) is skippered by Capt Harllee *(above)* whose experience made her 4.0 ship.

Is There a Formula for a

In June 1957, USS Rankin *(AKA 103) won the Assault Boat Insigne.*

In July, she won the 5-inch 38 "E" award.

In December, the Engineering "E."

September 1958 was a pretty good month. At that time, she became entitled to the 40mm "E," the Battle Readiness Plaque, and the Marjorie Sterrett Battleship Fund Award.

In October, she received a mark of "Outstanding" in her Medical Department and Supply Department inspections.

IT'S NOT TOO UNUSUAL for a reasonably smart ship to receive one, or perhaps two, such awards. However, *Rankin* now holds more awards than any ship of the Amphibious Forces of the Atlantic Fleet and, so far as can be determined, more than any PHIBLANT ship has held since World War II. This is, you must admit, somewhat irregular.

What are those qualities which enabled the presumably elderly and undistinguished *Rankin* to achieve such a remarkable record? Why is she different? Or is she? Does she deserve her awards?

Without any intent of invidious comparisons, ALL HANDS decided to ride the ship for a while and take a hard, second look to see if we couldn't take her apart and find, if possible, those qualities which made her an outstanding ship. We succeeded only to a limited extent but, for what they are worth, our findings are below:

Physically speaking, *Rankin* is just another AKA. She may vary in minor details from her sisters but, generally speaking, she is just a typical workhorse of the Fleet. Her ship's history says that she has a C-2 hull with an over-all length of 459 feet and a beam of 64 feet. Fully loaded, she displaces 14,160 tons; has a mean draft of 20 feet. She will never be noted for her speed. Her normal cruising speed is 12 knots; when hard pushed she can scorch along at 16 knots. She carries 448,734 gallons of fuel oil and has a cruising range of 16,584 miles.

For defense, she is armed with one 5-inch 38 caliber open mount and four twin 40mm AA mounts. However, as every man in her crew will be happy to point out to you, her main battery are her boats. She carries 14 LCVPs, eight LCMs, two LCPLs.

RANKIN is an attack cargo transport, designed and equipped to carry a small number of troops and the major portion of the supplies and equipment of a battalion. It is up to her to bring all this gear and men as close to the enemy as possible, get it over the side and on the beach with her small boats.

She is attached to the Amphibious Force of the Atlantic Fleet and is one of the ships of Transport Squadron Eight. Her allowance calls for 245 enlisted personnel and 23 officers. At the moment, she is a little light on enlisted men; and has a few officers over her complement. Captain John Harllee, USN, assumed command in November 1957.

As yet, there is apparently little to distinguish her from any other ship in PHIBLANT. Let's go on.

Rankin isn't, by any means, a fresh, sparkling, new ship. Nor is she a hoary old veteran, rich in traditions. She's just another one of thousands of ships turned out in 1945 and there's no need to kid ourselves that she's anything more. Commissioned early in 1945, she was able to complete her shakedown just in time to take part in the Okinawa campaign and, in her brief year of wartime service, managed to earn the American Campaign Ribbon; the Asiatic Pacific Campaign Ribbon with one star; the World War II Victory Ribbon; the Navy Occupation Service Ribbon with an Asian clasp; the National Defense Service Ribbon; the China Service Ribbon. By the time she got her keel wet, the war was pretty well over and she was able to earn her

LEADERSHIP—*Rankin* men get together to plan SP detail.

Smart Ship?

awards standing up and not even breathing hard. They were, you'll note, the standard set, earned by dozens of her peers.

DECOMMISSIONED shortly after the war, she was recommissioned at Alameda, Calif. and, in 1952, after shakedown training, joined the Atlantic Fleet that same year. Since that time, she has made numerous visits to home and foreign ports and has been busy with her perpetual training programs. She has carried Reservists and midshipmen on cruises; taken part in training operations and exercises; tested and evaluated new methods and equipment. This routine was interrupted by a brief, tense period in the Lebanon crisis.

Very well. As we've suspected all along, neither the ship nor her background provide much of a clue to the winning factor. Compared to some of the heroes of World War II such as *Enterprise, Barb* or *Fanshaw Bay,* or of our present-day glamor-queens such as *Ranger, Mitscher* and *Nautilus, Rankin* has all the sex appeal of a frowsy housewife.

If it isn't the ship, it must be the personnel. What's so different about these 250-plus men? They're just ordinary over-worked, over-tired human beings, with personal problems startlingly similar to our own. It's pushing coincidence just a little too hard to assume that all of them should suddenly become supermen. And, as any *Rankin* man will be happy to tell you, they are faced with the upkeep of a cruiser with the crew of a destroyer.

As a matter of courtesy and common sense, let's first discuss the problem with *Rankin's* commanding officer, Captain Harllee.

AT FIRST GLANCE, he's not the salty old sea-dog type one would expect. More of the grey-flannel school,

HEY! THAT'S ME—Photos, with name and rate of every crew member, flank award board on ship's quarterdeck.

TETE-A-TETE—CO gets the word from crew at birthday meeting. *Rt.*: XO's conference keeps ship's divisions posted.

even in his blue uniform, friendly and relaxed, but if you're smart, *you* had better not relax too much.

A look at his record makes it evident that, if he wants to talk on the basis of his experience, he is well qualified to do so.

An Academy graduate in 1934, he had his introduction to sea duty in USS *San Francisco* (CL 38) and then, until 1940, saw a series of ships in which he served as communications officer, gunnery officer and first lieutenant. During the war, he found himself in a number of PT boat units and, in '43, was skipper of PT Boat Squadron 12 which, while under his command, won a PUC for combat in New Guinea and New Britain.

By the end of the war, he was Chief of Staff for the Seventh Fleet PT boats, with some 224 PTs, 11 tenders, seven bases, 1000 officers and 10,000 enlisted men as his responsibility.

While he was CO of USS *Dyess* (DDR 880) after the war, the ship won the annual competition in DesDiv 62. He completed two combat tours in Korea as exec of USS *Manchester* (CL 83). When we mentioned his name to some of our friends, they recalled that he was CO—and a good one—of RecSta, Norfolk. His record confirms this; he was there from 1953 to 1956, in fact. This was followed by a tour as commander of DesDiv 152 in 1955-56. Before assuming command of *Rankin*, he was Chief of Staff and aide to ComDesFlot Three.

In other words, he's been around. He knows what it is like to be at the bottom of the chain of command, and he knows what it is to command. Both have their problems, we hear.

"EXPLAIN WHY *Rankin* was able to set the record she did?" he repeated. "That's quite an order. However, I've earlier given the problem a little thought and possibly I might be able to indicate certain lines of inquiry you might want to follow.

"First of all, you should always keep in mind that the results, good or bad, of any competition are not due to any one man, or any small group. A ship is, and has to be, judged by the total of the efforts of all hands. If one man tries extra hard, the performance of the ship is enhanced by just that much. Conversely, if a man fails to do his best, the ship and his shipmates suffer accordingly. The same holds true of any form of conflict, of course."

That made sense. So, how did it apply to *Rankin*? More specifically, his approach and attitude as commanding officer should, by all the rules, be important factors. What did he do, personally, to help *Rankin* establish her record?

"Somewhere along the line I became sold on the idea that, no matter how efficient, no matter how modern your tools and weapons may be, they are no better than the men who operate them. I know a lot of people say this, but I'm not so sure how many really believe it or, believing, act upon it. As the Navy becomes more and more technical, the officers and men become more and more important. For some years now, my main interest has been in men, not machines."

A theory we can go along with. But it's a theory. How did you apply it? What did you *do*?

"If you'll pardon me for just one moment, I'd like to point out that *what* I did makes little sense unless you understand *why* I did it. If I understand the situation correctly, you want me to give you some magic formula that you can pass on to the rest of the Fleet which will enable every ship who wants to, to take our awards away from us. A laudable objective, but they're still going to have to work for them. The formula doesn't contain that much magic."

No easy formula, and no single formula provides the answer.

"NOW, LET'S GET DOWN to *Rankin*. In the first place, she has always been a smart ship; a tight ship. A ship and her men don't spring out of the nowhere, into the here. What happens to her today is determined to a large extent, by what happened to her yesterday. We were fortunate enough to have had a number of highly efficient commanding officers. My predecessors, CAPT W. F. A. Wendt, for example, brought her to a high state of perfection. Take a look at her previous record. Since she was recommissoned, she won the Battle Readiness Plaque four times in six years, including the last three consecutive years. I was fortunate enough to benefit by the work that had been done before.

"The men were well trained; they knew their business long before I came aboard. My problem, as I saw it, was to persuade them to give that extra little push. For this, they have to *want* to do it. They can't be compelled. In this particular instance, that's what morale amounted to.

"Now we come to your question: *What* did I do?

"Briefly, I persuaded the majority of men aboard *Rankin* to want the awards as much as I did. I knew

if they wanted them harder than anyone else, they were well enough equipped to get them. That's all we did."

How?

"No one can agree, I'm sure, on just what morale is, or how it is to be achieved, but so far as I'm concerned, it is based on a respect for the personal dignity of the individual. There are exceptions of course, but as a rule, if you treat a man as a responsible, intelligent human being, he'll act like one. Some of the actual steps I have taken may appear to some of my contemporaries like coddling but, I think if you will talk to the junior officers and crew members, very few will make that accusation against me."

(NOTE: We did, and they didn't. Not by the shades of Captain Bligh, they didn't!)

"Generally speaking, I have tried to install in the officers the concept that, the more superior your position in the echelon of command, the greater the responsibility to earn the respect, by personal behavior and professional competence, of the men you command. This goes for commissioned officers, warrants, and petty officers. On this assumption, they must then do three things:

- Go to bat for their men all the way when they have done the best they can.
- Recognize, as much as possible, all outstanding and excellent work.
- Be smart enough to recognize any below-standard performance or conduct. See that it doesn't happen again or, better still, don't let it happen the first time."

CAPTAIN HARLLEE applies these principles himself. One of his most successful applications of his belief in the respect for the individual may be found in his birthday programs. We observed one.

On the occasion of each man's birthday, he is invited to the captain's cabin and presented with a birthday cake. A photograph is taken of the man, the cake and the captain and an eight-by-ten-inch print is sent, accompanied by a personal letter to the man's parents and wife. He gets an afternoon off as a half holiday.

Good enough, but not much more is done on board any number of other ships.

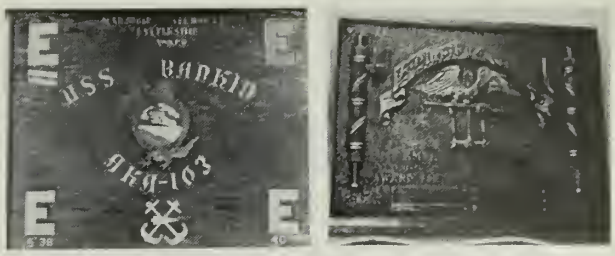
But there's a little more to it than that. Four men—C. A. Gainey, SN, M. E. Ford, SA, Glenn E. Murphy, SN, and W. L. Duncan, MMFN, were invited on the occasion we were permitted to witness the ceremony. Over coffee and cigarettes, the captain explained that, although their birthdays didn't happen to fall on that particular day, he had asked them to attend in a group because the ship was to be in New York for a week's liberty and he didn't want to interefere with any plans they may have made.

That out of the way, he came to the real reason for their visit. Was there anything any one of them wanted to bring up with him? This was the one day of the year in which they could feel free to discuss with him, as man to man, any problems, suggestions, ideas, gripes or questions they might have. If there was any point they wanted to discuss privately, say so, and he'd be glad to see them later.

The four looked at one another and at their coffee cups. The captain poured more coffee.

"Ford, you're a mess cook, aren't you? How are you getting along? Job OK?"

"Yes, sir. The job's fine."



Rankin's Award Board and Battle Readiness Plaque.

"How about the men? Good bunch to work with?"

"Yes, sir. The men are fine. There's one thing, though, captain . . ."

"Yes?"

"I was just wondering, sir. My brother is graduating from Ohio State this December. I was wondering if I could get home to see him."

"How much leave do you need for this?"

"I was sort of thinking in terms of from 16 December to 2 January, sir."

"That's a pretty long graduation, isn't it?"

"He graduates during the week of 16 December, but I was thinking, since I was home, and all . . ."

"It would be nice to spend Christmas and New Years there, too?"

"Yes, sir."

"I take it you have no leave coming to you at this time?"

"No, sir."

"Don't you realize that, if you were to take holiday leave, it would deprive some man who does have it coming to him?"

"I didn't think of that, sir."

"I'll talk to your Division Officer and see if you can't

Another Prize Winner: Mahoning County

Rankin is not, of course, the only ship to win the Marjorie Sterrett Battleship Fund award for 1958. The Pacific Fleet Amphibious Force ship ***USS Mahoning County*** (LST 914) received the PacFlt award in recognition of first-place standing in the battle efficiency competition.

The Marjorie Sterrett prize money of $500, for use of enlisted men only, is given annually to a ship in each of the ocean Fleets. This year, competition was between the respective Amphibious Forces.

Commanded by LT Robert Lee Dodd, USN, *Mahoning County* is a unit of Landing Ship Squadron Seven, which has its home port in Long Beach, Calif.

Recipient of the LanShipRon Seven 1958 Battle Efficiency Award, *Mahoning County* stood highest in the intratype competition.

Mahoning County was commissioned in early 1944 as USS LST 914, saw action at the invasion of Southern France, and participated in the Okinawa Landing of World War II.

Recommissioned in August 1950, she beached at Inchon, Korea, during the D-Day landings, and took part in amphibious operations at Wonson, Korea.

She returned from a normal tour of Western Pacific deployment in July.

WELL DONE—Crew members praise cook's efforts as he checks with men for criticisms and suggestions for mess.

do something about your brother's graduation, but I can't make any promises about the holiday leave. That all right?"

"Yes, sir. Thank you, sir."

MURPHY, who was 24, had no comments to make except that *Rankin* was a fine ship. Twenty-year-old Gainey was interested in the possibilities of transferring to the Seabees. No reflection on the ship, you understand, captain, but he had always wanted to be a Seabee. With just a hint of a sigh, Captain Harllee explained PHIBLANT's rule that a man must be on board ship for a full year before he can ask for a transfer. Nevertheless, he only wanted men on board *Rankin* who wanted to be there. If Gainey could get a waiver, *Rankin* would recommend the move. The captain dialed the personnel office, explained the situation, asked Personnel to report back to him.

Duncan, 19, has recently been married. His wife is on the West Coast. Is it possible to make a transfer? The captain explains the rules, doubts if it can be done, but he'll try. Another call to the personnel office.

The men have their picture taken with the captain and the birthday cake and depart, the last one with the cake. The others would get theirs on the day of their actual birthday.

The captain considers it his personal responsibility to work out, if possible, a solution to the problems or suggestions of his birthday guests. If it can't be done, he says so, and explains why.

Over a period of time, some exceedingly intelligent suggestions have been made. Just because they haven't been done before is no obstacle.

"WHY do we have to have reveille on Sundays when holiday routine is observed?" asked one man over coffee and cigarettes. "Why indeed?" echoed Captain Harllee. No more reveille on Sundays for *Rankin—except* when there is an operation under way.

"Cap'n, everything's fine, except on training maneuvers when we got all those extra cotton-pickin' Marines aboard, you just can't get near the movies," said another. "Just ain't enough deck space."

The solution for that was simple. Two movies; one for the ship's company, one for the Marines.

"One nice thing about the birthday program," observed Captain Harllee, "is that it serves more than one purpose. It tells me, for example, how the division officers are doing. They sometimes lose sight of the fact that, in addition to their technical duties, they are also responsible for the well-being and behavior of their men. This includes emergency leaves, schooling, transfers, family problems and the thousand-and-one day-to-day emergencies.

"If a man commits a disciplinary offense, his division officer and the head of his department are invited up to my office to explain why nothing had been done to forestall such a situation. I hold them personally responsible for the behavior of their subordinates, just as I am held equally responsible by my superiors."

DIVISION OFFICERS are further expected to encourage their men to prepare for advancement in rating, to study for USAFI courses, and to participate in athletics, sightseeing, hobbies and other wholesome activities. Because of her unique cargo-carrying capacity, *Rankin* is one of the few ships in the U. S. Navy that can boast of a full-fledged basketball court on board. It is well used.

The captain also meets individually and gives a short informal orientation talk to every new man as he reports on board, and also bids farewell to each departing man.

Another example of attention to the individual on board *Rankin* is the "Picture Board." Most ships have photographs of the commanding officer, the executive officer and perhaps other officers, on the quarterdeck. On the principle that there are no unimportant men in *Rankin*, the ship's company has erected two large boards which contain the photographs (most of which are *not* ID pix) and names of every single crew member—officer and enlisted—aboard ship. To lend point to the display, the two boards flank an equally large board which shows all the ship's awards.

One other point which shows the trend of Captain Harllee's thinking. He considers the performance of the personnel office of tremendous importance to the welfare of individual members of the crew. Intelligent and prompt action means a lot to the man who is sweating out a request. Like most ships, *Rankin* is understaffed in the personnel office. It was built up to full strength (at the cost of the deck force) to the point where it can handle without undue strain, almost any request made of it. The deck force doesn't mind—much. They know that when they ask for service in the paperwork department, they'll get it.

WE COULD GO on for pages, citing one instance after another of the small details which, all added together, make a big total.

"But don't get me wrong," said Captain Harllee at one point. "I try in every way to do as much for the individual man as is permissible. BUT—this is a military organization and any solicitude for individual welfare must be accompanied by a policy of strictness and military justice. All hands know that any personal interest in their welfare will not excuse, in the slightest, any breach of military discipline."

("You can say that again," one of the crew members told us later. "Man alive! You get up there in front of him at mast, and you think you never seen him before. He sure don't know *you*!")

(His friend nodded. "He's rough, man. Rough. You

keep your nose clean, though, and you never see a nicer fellow.")

In connection with discipline, it might be noted that every officer on board *Rankin* has been directed to read Admiral Burke's "Discipline in the U. S. Navy" (NavPers 91195), and to submit a paper containing his recommendation on how *Rankin* could be improved with regard to discipline.

One thought occurred to us as we were talking to the captain. Had he ever taken any courses in personnel management?

"No, I never have, other than can be found in Navy publications on leadership. You ought to read them some time. They're very helpful and, I for one, find them interesting."

He made a suggestion.

"If you really want to know what makes *Rankin* tick, why don't you wander around and talk to the men? Make yourself at home. See what they have to say. They're the real *Rankin*."

WE DID. We talked to a lot of men. The names of most we have forgotten, but we haven't forgotten what they said. Sometimes we just passed the time of day, sometimes we sat in on their bull sessions. We heard a lot of stuff not relevant to our inquiry and we heard a lot of stuff best forgotten.

We've always agreed with the thesis that, if you really wanted to know what was going on aboard ship, drop around to the chief's quarters, promote a cup of coffee, and keep your mouth shut. If they haven't heard of it and haven't formed an opinion, it hasn't happened and isn't going to happen.

"Why did *Rankin* win the Sterrett award?" said one. "Damned good ship, that's why."

"That's no reason," argued another. "What makes a good ship? Her officers, that's what. For some reason, *Rankin* has the best set of officers I've seen in 20 years." His voice took on a tone of wonderment. "Come to think, most of them are ensigns, too. What d'ye know? Funny."

"Now, wait a minute. Take Mister Frost, for example. He's a lieutenant, and you couldn't ask for a nicer man."

"That's right. When I wanted to get home and see my folks, he gave me an advance in pay without saying a word."

"That ain't so much. He has to do that. The Old Man told him to."

"He could still give you a hard time."

"Trouble with this ship is, they work you to death. Never have a free minute to yourself."

"Look who's talking! When was the last time you worked up an honest sweat?"

"Speaking of work, one thing you got to say for *Rankin*. You do a decent job, they let you know it."

"YOU MEAN MERITORIOUS MAST? Sort of flag-waving, isn't it?"

"A little overdone, maybe. Did you know that, since the Old Man came on board, we've had more than 30 meritorious masts? Performance didn't jump that much. No, I mean . . . You take Mr. Ballou, down in Engineering. You do a good job, he tells you. You louse it up, he tells you, too. They care what happens to you. Like Mr. Goldstein. He's always giving us hell for not studying, not figuring out what our plans will be. So we don't do it, it still makes a difference."

LOOK-OUT—*Rankin* bridge crew checks destroyer with glasses as both ships make way through Atlantic gale.

"They do care, I guess. Or act like it," offered another. "We got a young punk in the deck division, he thinks it's bigtime stuff to go out and blow all his money and get drunk every time he pulls liberty. It's none of my business, I tell myself. But then I hear that young Mister Hargadon talking to him like a dutch uncle, trying to teach him better. What are these ensigns coming to? He's only been on board a couple of months. Who tipped him off about this guy? Most other ships I been on, it's the ensigns you have to watch on liberty."

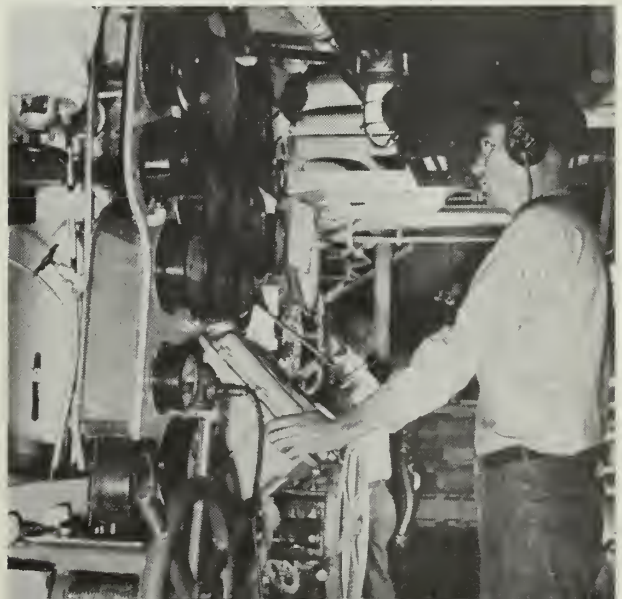
"You want to know why? The Old Man's a rough guy for us to face on the morning after. How'd you like to explain to him why you got thrown in the can for being drunk?"

"No thanks."

IT WAS OBVIOUS that Chief Steward W. H. Ware, USN, had put a lot of thought to the problem.

"She's a willing ship. You ask a man to do something, and explain why, he'll pitch right in and do it even though he—or you—don't like the idea. Why? I'm not quite sure. Has something to do with the officers, I guess. They're a wonderful bunch of men, from the captain on down. Even the junior officers. They're

TEAM WORK below decks as well as topside was shown when Engineering 'E' was added to ship's award board.



all really quite decent. You trust them.

"I've got 14 years' service and been on five different ships and, except maybe for *Lindenwald* (she's an MSTS ship, now), this is the only one that has had that spirit. *Lindenwald* was a willing ship, too. Yes, I guess it must be the officers."

Through experience, we've learned that, although the officers pay their own mess bills, the crew usually eats much better. We lost no time in cultivating the commissary department. We were greeted with:

"G'morning. Like to try a pork chop? They're excellent. Fresh out of the broiler. What do we think of *Rankin*? Best ship in PHIBLANT. Good feeder, if I do say so myself. I don't know how Mr. Frost does it, but we get food aboard here that the other ships never heard of. We don't ruin it, either."

On our way to the mess hall, we ran our fingers along the overhang. No dust. We looked behind the scuttlebutt. No dust there, either. We noticed that the spit-kits were full, but not running over. No cigarette butts on the deck.

"YOU'D BE SURPRISED the difference these little bitty stools and tables make," said one boatswain's mate. We got these last time we went in for overhaul. BuShips said they weren't on the allowance list, so we took the money out of our Rec Fund and Uncle John told them to put the damned things in. They sort of take away the institutional look."

"See those drapes?" his companion asked with pride. He pointed to a broad expanse of brilliant-colored, brilliant-designed drapes which covered one wall of the mess. "They come from the Rec Fund, too. The Old Man had a fit when he saw the pattern. Tried to talk us out of it, but we said we wanted it, so we got it. Pretty, ain't they? I picked out the pattern."

"You heard about our EM Club last Christmas?" asked another. "Quite a deal. We were stuck in this little town in Italy, see? Not a damned thing to do. But nothing. So Uncle John, he . . ."

"That wasn't so much. You should of been at the Christmas party we throwed for the kids. The expressions on their faces when Santa Claus stepped out of that helicopter! Man!"

LATE ONE EVENING toward the end of our trip, we decided to visit the captain again.

"Find what you wanted?" asked the captain.

"Yes, sir. Just one thing, if you don't mind. You seem to have an unusual way of running a ship. As you said before, we wanted to be able to tell the rest of the Fleet how you did it. But if we mention some of these things, you might find yourself in trouble for overstepping your authority."

He nodded. "I was hoping that you'd get around to asking about that. I have the best authority in the world. Permit me to quote:

'1. Every command in the Operating Forces and the Shore Establishment, as well as every major office or bureau of the Navy Department shall review, on a continuing basis, its standards of personal leadership to ensure that those in responsible positions are discharging their duties in accordance with Article 0702A and 1210 of *Navy Regulations*, 1948. This will include command attention to:

a. The personal example of behavior and performance set by officers.

b. The moral atmosphere of the command.

c. The current standards of personal supervision of men, both in regard to management effectiveness and the development of moral responsibility.

'2. To achieve the objectives outlined above, every command in the Operating Forces and the Shore Establishment shall integrate into their training programs, on a continuing basis, both the technical and moral principles and practices of leadership.'

"Ever hear of that before?" he asked.

"It sounds faintly familiar captain."

"It is more than 'faintly familiar' to every commanding officer. It is the heart of General Order 21. You've heard of that, I presume?"

"Yes, sir."

"You've spent a couple of days talking to the officers and men on board. I don't know what they've told you, but I think—I certainly hope—that if you analyze what they've said, you can find the origin in G. O. 21."

"Are you suggesting that application of General Order 21 enabled *Rankin* to win all those awards, captain?"

"I'm suggesting that effective leadership, as outlined and defined in General Order 21, enabled us to build morale to a point which made it possible to employ more effectively the technical competence which is available to us and to almost every ship in the U. S. Navy. Before General Order 21 was promulgated I, just like many other commanding officers, was doing my best in my own way to promote morale and leadership. This Order helped us clarify our thinking and, so far as I can see, gave us the authority to take the steps we considered necessary. That's all I'm suggesting."

NOTE: *We saw the ship with our own eyes. We talked to a lot of men on board, but we're still not sure that we've got the whole story. And even if we did get the story, limitations of space would prevent us from describing in detail the tremendous spirit of morale we found in* Rankin. *We managed to cite roles of some individuals, but we haven't been able to describe the valuable role played by CDR P. W. Hopkins, the executive officer. To make the story complete, there are many, many others we should, but can't, cite.*

To be accurate, we would have to mention every man on board. It's their attitude which made Rankin's *record possible. How else account for the speed and precision of the deck gang when putting an LCM into the water? How account for the absence of VD; for the absence of UA cases; for the fact that there are extremely few accidents aboard?*

We know there are other outstanding ships in the Navy. Others, too, can boast that you can inspect the galleys with white gloves, can look in vain for dirt and grime in the out-of-the-way spots. We know there are many other ships whose liberty parties come back night after night without trouble on the quarterdeck.

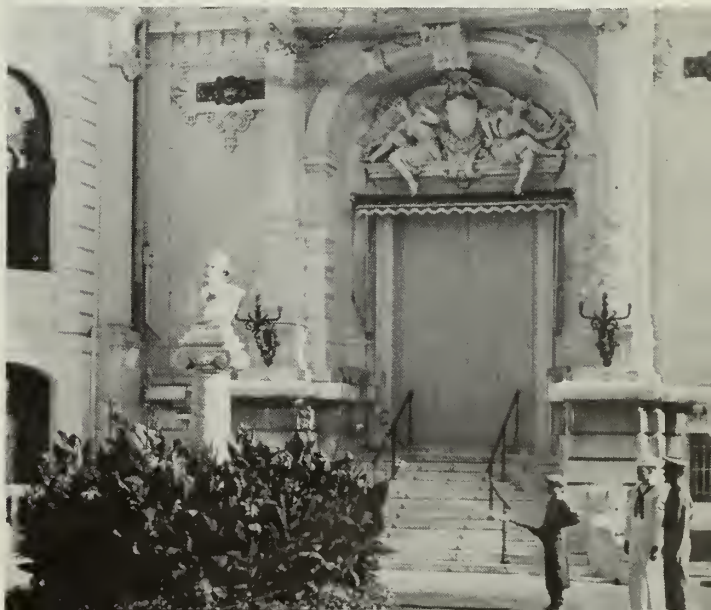
But here's the point: We know about Rankin. *We are pretty well convinced that all hands follow the leadership principles outlined by the Secretary of the Navy and the Chief of Naval Operations, and the leadership analysis program established by the Chief of Naval Personnel.*

Do you have any ideas or opinions on the subject? If so, tell us about them. We'll be glad to pass the word.

Sure, We've Been There

CANNES, MONACO, ATHENS, BEIRUT and many other places with romantic names have become well known to the ears and eyes of the many Navymen sailing the Med this past year. Carriermen of USS *Wasp* (CVS 18) were no exception. While on a tour of duty with the Sixth Fleet during which they performed antisubmarine operations these carriermen got a look-see at the above-mentioned places although liberty was not granted at Beirut. *Wasp* is back on duty in the Atlantic, but the memory of those tourist spots lingers on.

Top Left: Wasp cruises through the Mediterranean while on operations with the Sixth Fleet. *Top Right:* Carriermen enjoy the wonders of the Acropolis while sight-seeing in Athens, Greece. *Right: Wasp* men relax in the sun and enjoy the passing scene on French Rivicra at Cannes. *Bottom Right:* Sailors from *Wasp* admire statue by Casino at Monte Carlo while visiting the principality of Monaco. *Bottom Left:* Off-shore view was all crew got as their ship anchored off Beirut.



TAFFRAIL TALK

WITH THE YEAR 1958 a matter of history and a brand-new calendar on our desk, we were seized with a wild, mad impulse to clean out our hell-basket. Our plunge into the wilderness was rewarding. We found several outstanding examples of pin-up art, a news clip which vividly described the hard life of an editor, a number of personal letters we intended to answer but never got around to, a pen we thought we had lost, a number of paper clips, a clutch of unpaid bills, and too many miscellaneous contributions. We had tossed these in the basket because we didn't know what to do with them. We still don't, so we are passing them on for your consideration.

★ ★ ★

Someone has also invited our attention to the sad experience of Chief Engineman M. J. Burkholder, USN. What happened to him we wouldn't wish on our best enemy.

He's attached to the District Motor Pool, Kodiak, Alaska, where, not so long ago, a Halibut Derby was held. The prize was won by a 13-pound entry. Meanwhile, Burkholder, with the help of two of his friends, struggled for an hour or more to land a 237-pound monster on a 65-pound test line.

So what's wrong with that? Nothing, except he hadn't bothered to enter the derby. He just went fishing for the halibut.

We also found an elderly copy of the *Jax Air News* which, in turn, told of the discovery by LCDR H. F. Johnson of a still older copy of "The Observer," ship's newspaper of USS *Lexington* (CVA 16), dated 20 Mar 1931.

So what? Nothing much except, as LCDR Johnson says, its masthead was interesting. It shows a certain CAPT E. J. King as CO; a CDR J. H. Hoover as Exec; and the editor was an All-Navy golfer named LCDR William S. Popham. Among its news items was a reference to CDR Daniel Hunt reporting aboard as medical officer and a mention of a young pilot LT A. M. Pride.

As LCDR Johnson says, he didn't know it, but he was traveling in fast company. The commanding officer went on to wear the five stars of a Fleet Admiral and the executive officer in later years, was to wear the four stars of an Admiral.

The medical officer who had just reported aboard became a RADM in the Medical Corps, and the young pilot, who had just received his first intimations of glory with the first landing aboard the ship, later turned out to be—VADM Alfred M. Pride. The editor of "The Observer" retired not too long ago as a RADM.

As we've said before almost to the point of boredom—better be respectful to your shipmates. Some of them may end up as admiral.

The All Hands Staff

The United States Navy

Guardian of Our Country

The United States Navy is responsible for maintaining control of the sea and is a ready force on watch at home and overseas, capable of strong action to preserve the peace or of instant offensive action to win in war.

It is upon the maintenance of this control that our country's glorious future depends. The United States Navy exists to make it so.

We Serve with Honor

Tradition, valor and victory are the Navy's heritage from the past. To these may be added dedication, discipline and vigilance as the watchwords of the present and future. At home or on distant stations, we serve with pride, confident in the respect of our country, our shipmates, and our families.

Our responsibilities sober us; our adversities strengthen us.

Service to God and Country is our special privilege. We serve with honor.

The Future of the Navy

The Navy will always employ new weapons, new techniques and greater power to protect and defend the United States on the sea, under the sea, and in the air.

Now and in the future, control of the sea gives the United States her greatest advantage for the maintenance of peace and for victory in war. Mobility, surprise, dispersal and offensive power are the keynotes of the new Navy. The roots of the Navy lie in a strong belief in the future, in continued dedication to our tasks, and in reflection on our heritage from the past. Never have our opportunities and our responsibilities been greater.

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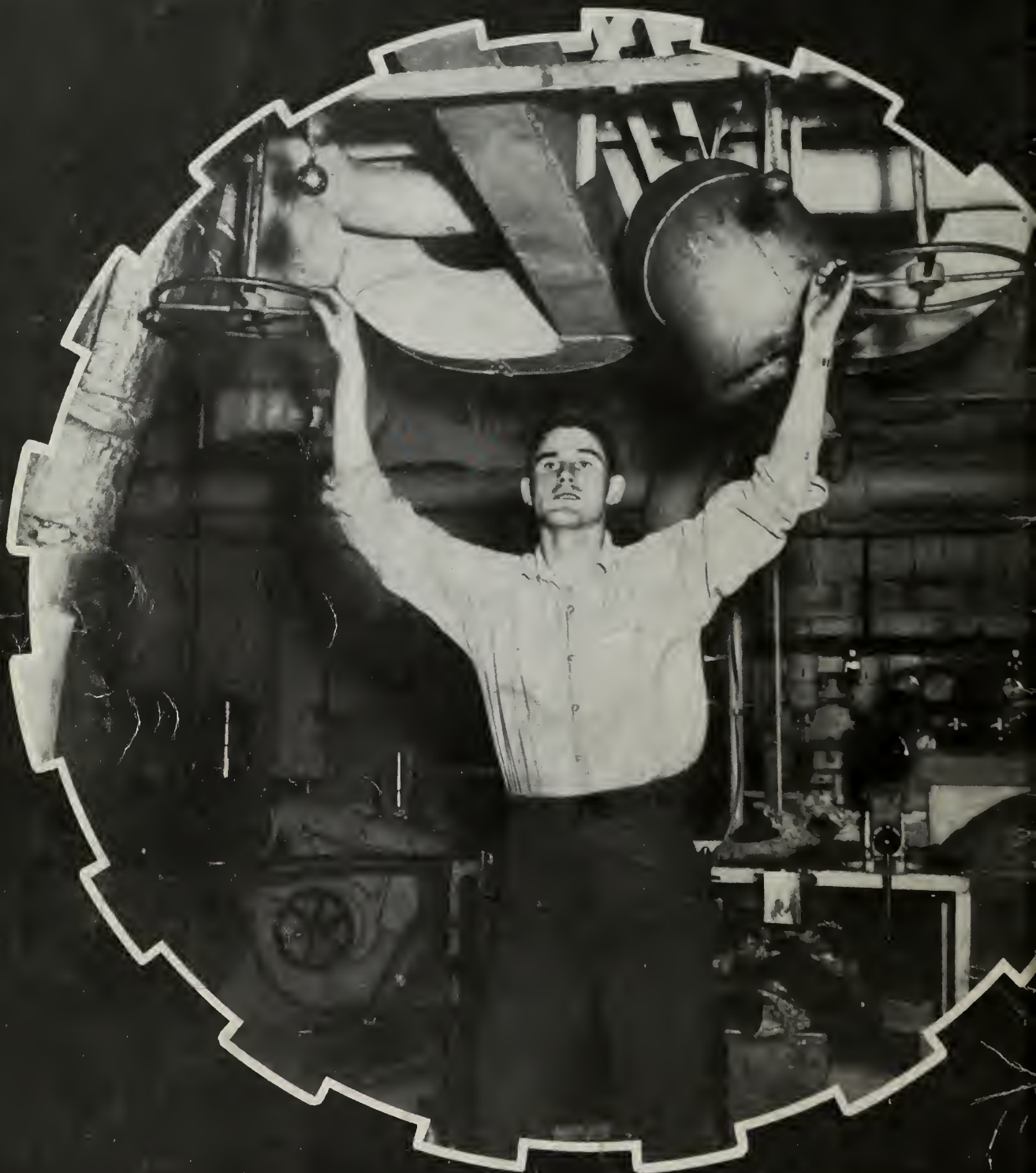
• AT RIGHT: HOLD TIGHT—Deck gang member of *USS Rankin* (AKA 103) climbs high while securing for rough weather before cruise through a gale in Atlantic waters off Norfolk, Va.

WHAT MAKES THE WHEELS GO ROUND?



YOU!

ALL HANDS

THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN

FEBRUARY 1959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• **FRONT COVER: ON DECK**—Navy pilot CDR R. L. Cormier checks ordnance being loaded into his plane with J. D. Carr, AO2, before taking off on training flight while at sea on board attack aircraft carrier *USS Shangri La* (CVA 38).

• **AT LEFT: MARCHING MEN**—Precision drill team from Naval Training Center, San Diego, Calif., steps out with entertainment for citizens of National City at special showing of a movie presented during the city's 'Salute to the Navy Week.'

• **CREDITS:** All photographs published in ALL HANDS are official Department of Defense photos unless otherwise designated.

PATUXENT: FLIGHT TEST

A LOT MORE THAN TIME has flown at the Patuxent River Naval Air Station since its doors were opened 15 years ago.

But the story of the Naval Air Station goes back further than that—back to the period of rapid expansion of naval aviation. This was before and during World War II when the need arose for accurate, factual data on all types of aircraft and equipment.

The story begins in 1939. At that time, the existing test facilities were divided between the heavily congested areas of Anacostia, Norfolk and Philadelphia. There were many delays in coordinating test facts. Some planes and equipment could not be tested at these locations because of lack of proper facilities.

For instance, the Flight Test section was located at NAS Anacostia. This section checked the flying qualities and carrier suitability of new model aircraft and equipment under actual flight conditions.

The Aircraft Armament unit, which determined whether or not an airplane could conduct its mission as a bomber or fighter, was located at NAS Norfolk.

The Radio Test section, which had the job of getting the bugs out of the entire electrical system of airplanes as well as navigational and instrument aids, was housed at NAS Anacostia. Anacostia was also the base for Service Test which evaluated new aircraft strictly for tactical purposes. It soon became apparent that a place was needed where all of these facilities could be brought under one roof.

In 1941 a board recommended as a new Navy Flight Test Center the 6800-acre tract with about nine miles of shoreline, where the Patuxent River and Chesapeake Bay at Cedar Point, Md., meet. In April 1943, NAS Patuxent River, Md., was commissioned.

Runways had been laid down not only to accommodate the largest types of aircraft then in existence but with an eye to aircraft of the future. The runways were made long and wide to take care of all test work. The longest of the original ones was just a mite under 10,000 feet. It was later lengthened to 11,800 feet.

Consolidation of the various test facilities began. By mid-August, Flight Test and Radio Test were moved from Anacostia. There was a shuffle in Norfolk with the departure of the Aircraft Armament unit and the Aircraft Experimental and Development Squadron to Patuxent.

The entire aircraft testing program was speeded up. New type aircraft called for qualfied test pilots. And they were available. Many combat-tried and combat-proven pilots arrived on the station in June. Because of their experience, they were considered best able to evaluate aircraft and equipment for combat capabilities.

The different theaters of war sent back captured aircraft for evaluation. From the Atlantic side came a German Focke-Wulf 190 and a Dornier Do335A; the Pacific's contributions were a Japanese "Kate" and "Tony." These planes were studied and flown constantly to discover their weak points. Part of the evaluation was to find the best means to knock them out of the air quickly. The discoveries made at Patuxent—thousands of miles from the fighting fronts—were passed on to the Fleet and resulted in greatly increased kills.

Another development made at Patuxent was radar mining which was later used extensively in Japanese home waters. Night fighter tactics were developed, improved and

SUITS ME—Aero-Medical Branch tests pilot's personal gear at NATC Patuxent.

CENTER

finally written as the basic syllabus for the Fleet. Problems in rocket- and bomb-tossing were also solved here.

The Aero-Medical branch of Service Test measured the effects of gravity on fighter pilots in pull-outs, and tested pressure suits for high-altitude work. Radar-fire-control, radar-tracking, field-lighting and instrument-landing techniques were also extensively tested and developed.

With the development of new model aircraft and equipment the need for more thorough tests grew. Fleet squadrons were receiving some planes and equipment which wouldn't work in the combat zones owing to parts failures and structural failures. To combat this, Service Test operated around the clock, and averaged 2500 flight hours a month during a 14-month period.

Usually three aircraft of each new model were received by Service Test. These planes were operated day and night, under all conditions, until single-engine aircraft had logged approximately 450 hours and multi-engine aircraft, 1200 hours. At the end of that time they were taken apart piece by piece and thoroughly checked for wear, tear and stress. So thorough was this testing that one leading combat plane underwent 19,000 major and minor design improvements during the war.

Adequate security for the new station was considered a matter of prime necessity. Guards were posted at the main gate and at the property under construction. Then in October 1942 the first detachment of Marines arrived and took over the security responsibility.

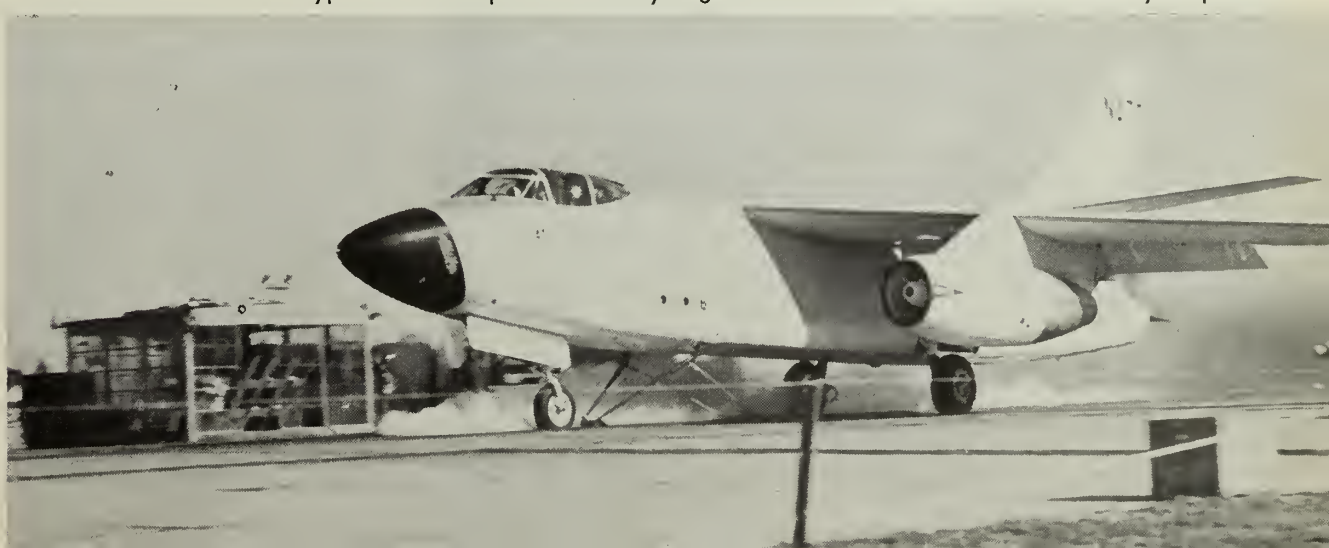
PATUXENT PORTRAIT—Aerial photo shows test center with its long shore line.

But the most colorful security group to be stationed at Patuxent River, however, arrived in September 1943. This group was a detachment of Coast Guardsmen who had the job of assisting the Marines by maintaining the security of nine miles of river and bay shoreline surrounding the station. To aid in their mission the Coast Guardsmen brought with them 67 sentry dogs and 29 horses.

In line with the mission of the many other Coast Guard Beach patrols, those at Patuxent were not intended as a military protection of the coastline. These patrols were designed to act in the nature of outposts, to report activities along the coastline, and to investigate and hold suspicious evidence or persons.

The dogs, with their acute senses, added greatly to the effectiveness

ALL STEAMED UP—Carrier-type steam catapult is used by Flight Test Division to test carrier suitability of planes.



BIG BOYS at Patuxent are WV2 planes of Airborne Early Warning Wing VW-2, that makes NATC its home port. Here three WV2s fly over Chesapeake Bay.

of the Coast Guardsmen on patrol. And the use of horses doubled the distance a Guardsman could patrol without impairing his effectiveness.

By late 1945, paved roads had been built around the perimeter of the station and one of the most colorful chapters in the history of security at the Naval Air Station came to an end. In November 1945 Navy vehicle patrols assumed the patrol duty and the Coast Guard detachment was disestablished.

In the early years, when the station was in the beginnings of construction, there was one little hold-up

SHORE ENOUGH—Nine miles of shore line formed by Patuxent river and Chesapeake Bay provide good facilities for beaching seaplanes like P5M *Marlin*.

—it was difficult to get supplies in there. There were only a few ways to do it. Access, at first, was by a narrow winding road to Washington, D.C., some 63 miles away. Or you could get there by barge on the Patuxent River and Chesapeake Bay. The nearest railroad connection was at Brandywine, Md., some 40 miles away.

If the station was going to exist at all and carry out the functions for which it was intended, something had to be done. It was. And it didn't take long. In just one year a connecting railroad was built from Patuxent to Brandywine and the narrow winding road was widened and straightened into a highway.

The isolated location of the station as well as the lack of liberty and recreational facilities in the area, resulted in the establishment of the Welfare and Recreation Department. A USO was organized in what is now the Enlisted Men's Club.

In May of 1944 ground was broken for the drill hall. A year later, the swimming pool was opened. The recreation area at Harper's Creek including boats and a snack bar; a swimming and picnic area was opened in 1946. An 18-hole golf course was officially opened in May 1947.

The first plane assigned to Patuxent was an SNJ. But, owing to the lack of gasoline at Patuxent, it had to refuel at NAS Anacostia. Later there would be many planes based at "Pax."

Today, with more than 100 jets at the station for evaluation, it is a little difficult to imagine the test center with just one. But CDR Lawrence E. Flint, USN, of Test Flight remembers the arrival of the first jet airplane to arrive for evaluation. Why? Because he tested it.

CDR Flint recalls flying that pioneering jet, a YP-59, when it arrived at Flight Test in October 1944.

It was the first all-jet plane the Navy had seen. "The thrust was so low," CDR Flint recalls, "it practically sailed off the ground. There was no feeling of power compared to today's jets with their tremendous force."

Initially there was one YP-59. Later, three or four. A sleek looking plane for its day, it was an experimental model never introduced to the Fleet. Other higher performance jets replaced it, but it was

still a first, both to CDR Flint and to NAS Patuxent.

RECOGNITION of the continuing important role of Patuxent in naval aviation came on 16 Jun 1945, on which date it was formally given the title of Naval Air Test Center.

Many history-making events have taken place at Patuxent. Among these would be the designation of Patuxent as an all-weather station in November 1948. In May 1951, the Ground Controlled Approach brought in its 20,000th landing.

A Naval Weather Service Division of the Operations Department had started functioning in February 1943. Since then it has steadily increased in size and scope until today, the weather of the entire world is plotted from there.

Additional highlights in the Test Center's 15-year history, including records established by pilots are:

In December 1951, JATO was used as a booster for the first time on helicopters, using model HRS-1.

In October 1953 LCDR James B. Verdin, USN, flew a bat-wing F4D-1 *Skyray* over a straight, low-altitude, three-kilometer course at 752.943 mph.

In October 1955 LT Gordon L. Gray, USN, piloted an A4D-1 *Skyhawk* around a 500-kilometer closed course to set the world record of 695.127 mph.

In August 1956 CDR R. W. "Duke" Windsor, USN, flew an F8U *Crusader* to a world's speed record of 1015.428 mph.

In March 1957 CDR Dale W. Cox, Jr., USN, piloted an A3D-1 *Skywarrior* on a round-trip from New York to Los Angeles to set a new transcontinental speed record in the elapsed time of nine hours, 31 minutes and 39.24 seconds.

The Naval Air Station is rich in historical lore. The home of the Commander Naval Air Test Center, is "Mattapany," which dates back to the middle 1600s.

On the site now occupied by the station chapel, a church was first built in 1795. The present chapel, constructed in 1924, is adorned with a crucifix which is lifelike in size and weighs approximately 3000 pounds. It was designed and sculptured by Felix De Weldon, ex-seaman of the original station.

De Weldon is also the sculptor of the Suribachi National Memorial Monument, the famed Marine monument to the flag-raising at Iwo Jima.

TIME FLIES—First plane to be based at Patuxent, like the SNJ at *top*, poses quite a comparison with sleek lines of today's record-breaking F8U-1 *Crusader*.

SHOOTING THE WORKS—Armament Test Division puts naval aircraft fire power to the test. Here an FJ-4B *Fury* is bore-sighted in division's firing tunnel.

Young Salts Go to Sea

As most photographers and PIO people know, one of the surest ways to get people to look at a picture is to put a kid in it. The fact that you are now reading this is proof the technique works.

Reading clockwise from upper left, here's what these members of the gum-ball fleet are doing.

Alby Saunders, 7, son of Ansil L. Saunders, BMC, is sworn in as a "Junior Chief Petty Officer" by RADM Robert L. Campbell. Alby's father (Rt.) retired the same day.

Members of a small Reserve unit from Long Beach, Calif., get the word on uniform of the day.

Raymond Hall, "BM2," shows what the well-dressed boatswain should wear—including even the correct facial expression.

Billy Simmons picks out his father's ship, uss *Steuben County* (LST 1138), in San Diego, Calif.

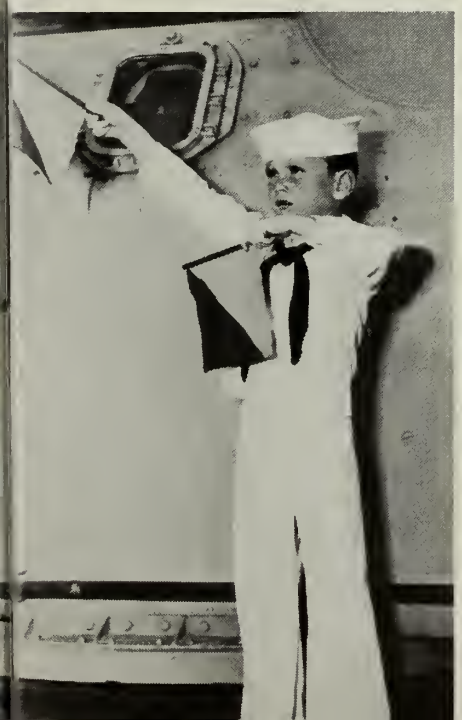
For a Day

Kenneth Wever, 5, whose dad is an SM1, gets an early start at practicing up for his practical factors.

Linda Smith, 4, tries steering uss *Hancock* (CVA 19) during an open house at San Diego, Calif.

Little Chief Gregory Lee Krekleberg helps conduct an inspection on uss *Bryce Canyon* (AD 36).

Albert Hyers, DM3, gets a salute from his son, Kenneth, upon returning from the western Pacific.



OFF TO SEA—Reservist salutes smartly as he reports for Selected Reserve cruise. *Rt:* Deck gang handles lines.

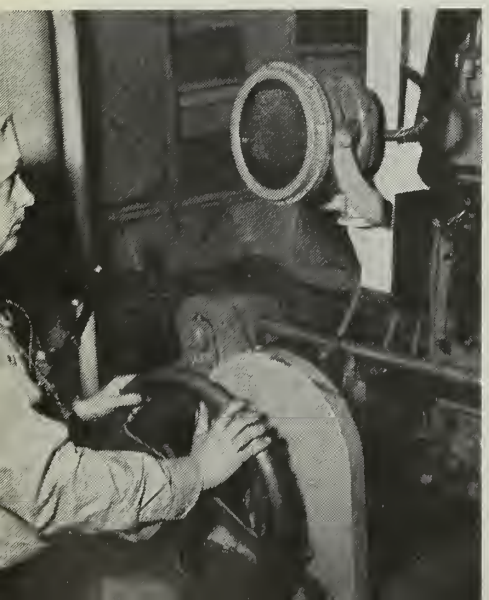
Meet the Ship with Two Crews

THE SAILOR quickens his pace in the crisp morning air. Tightening his grip on his seabag, he climbs the gangplank, salutes the colors and OOD, checks in with the MAA, and disappears below.

A few moments later, having changed from dress blue bravo to dungarees, he reports topside to assist the anchor detail.

The sailor—a Naval Reservist—is a member of USS *J. Douglas Blackwood* (DE 219) Reserve Crew. On the third weekend of each month,

RESERVIST mans DE wheel on cruise.



he and his fellow crew members drill on board the DE so that they will be ready for immediate sea duty if hostilities should break out.

Normally, the ship cruises from her home port, Philadelphia, to the Virginia capes operating area. Occasionally, when repairs are needed, the crew drills on board at the shipyard, or undergoes training in firefighting, damage control and the like at the naval base.

This weekend the ship is scheduled to head for the Virginia capes and engage in firing exercises.

As the Reservists report to their stations, two tugs maneuver alongside the DE. Finally, a pilot boards the ship and guides her out of the harbor. The tugs cast off, and the DE is on her own—manned by some 114 Reservists and a nucleus of active duty personnel.

By midafternoon, *Blackwood* reaches the operating area. Firing exercises are delayed, however, until a number of fishing craft are beyond the range of the DE's 5-inch and 40mm guns.

All the while, of course, departmental training is carried out in all parts of the ship. In the Operations Department, for example, RDs receive radar instruction, QMs instruction on loran, CIC personnel undergo ASW instruction. Signal bridge personnel practice flaghoist drills, flashing light drills. In the Engineering Department, the "A" gang receives instruction and practice in the operation of evaporators. "Loss of power" drills are carried out, and EMs undergo throttle drills.

The Gunnery Department carries out director tracking drills. There are transmission checks and prefiring checkoffs for the 5-inch and 40mm batteries. Bore erosion gauge readings are taken on the batteries. The MAA conducts 45-caliber pistol instruction on the fantail.

In the Supply Department, commissarymen and mess cooks attend a lecture on food sanitation and the proper stowage and breakout of stores. More important, perhaps, they prepare all meals for officers and men.

At 1530, General Quarters is sounded and the Reservists, in full battle dress, hurry to their stations.

The forward 5-inch gun is fired, and a black cloud appears in the sky. Then the order comes to fire the 40mm guns, now aimed at the cloud "planted" by the 5-inch shell. All in all, some 10 rounds are fired from the 5-incher, and approxi-

TOPSIDE TRAINING—Morris F. Powell, QM3, USNR, receives signaling instructions. *Rt. and Below:* Gunners practice.

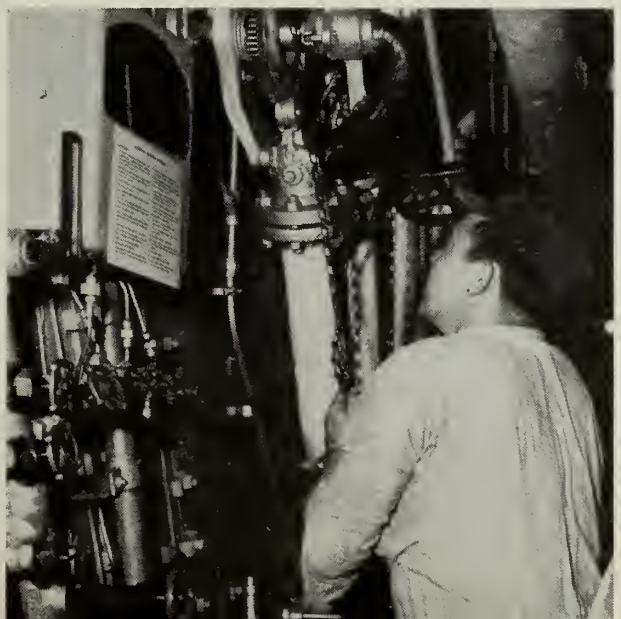
– and They're Both Tops

mately 100 rounds of 40mm ammo are used as the Reservists—some of them on their gun mounts for the first time—go through the firing procedures.

Next on the Plan of the Day are shiphandling exercises. "Oscar," the dummy, is slipped unobtrusively over the side by a chief. An alert sailer shouts "man overboard!" and the word is quickly passed throughout the ship.

On the bridge, a Reserve officer takes the conn, bringing the ship around to pick up "Oscar." Two men stand at the rail, with grappling hooks and lines, ready to retrieve the soaking dummy. Quickly the ship pulls alongside "Oscar." The first Reservist tosses his grapple; he misses. The second man runs along the deck, heaves his grapple harpoon style, and "Oscar" is caught and brought aboard. *Blackwood* goes through this exercise several times, giving different Reserve officers a chance to take the conn, and other Reservists to retrieve "Oscar."

DOWN BELOW—Selected Reservists get feel of their ship, USS *J. Douglas Blackwood*, while operating boilers at sea.



PRACTICE FOR ALL—J. E. Hecht, SMC, J. Pfeiffer, QM1, plot while Reservist F. A. Bender, FA, works with black gang.

By now, it's 1730 and the men secure from drills and instruction. All ship's work is knocked off, and mess call is sounded.

Movies are shown in the wardroom and crew's messing compartment for all who aren't standing watches.

At the sounding of Taps at 2200, most of the Reservists are more than ready to hit the sack.

Sunday finds the DE and her Reserve crew continuing departmental training and conducting emergency drills such as engine steering casualty, abandon ship, and collision.

By 1600, the ship is back in home port, being eased into her berthing space by tugs. The Reservists, again in dress blues, muster before securing from the drill.

USS *Blackwood* is one of three DEs assigned to the Fourth Naval District as Selected Reserve ships. The other two are USS *Tabberer* (DE 418) and USS *McClelland* (DE 750). A fourth ship, USS *Sigourney* (DD 643), will be added to the program next summer. All ships are part of the ASW Surface Component of the Selected Reserve.

As this is being written, *Blackwood* has a Regular Navy crew of 50. This active duty complement includes an officer-in-charge — an LCDR—who acts as navigator when the Reserve crew is on board, an engineering officer—an LT, and enlisted men who serve as instructors and maintain the ship when she is not being used for training.

Eventually, the DE's active duty crew will be phased down to a total of two officers and 33 enlisted men. Reservists will be assigned to fill the vacancies.

Members of the Selected Reserve crew have "pre-cut" mobilization orders directing them to report immediately to the ship in the event of a war or national emergency. To qualify for membership in the crew, the Reservists must reside at locations that will allow them to report for active duty in a matter of hours, without reliance on public transportation. They must, of course, live within commuting distance for weekend drills.

The commanding officer of the Selected Reserve crew has orders as prospective CO of the ship, and he would become CO in the event of mobilization. The active duty personnel would remain on board,

IT'LL BE GOOD—Reserve cooks T. J. McGoldrick, CS2, F. J.Minus, CS1, prepare meal. *Rt:* Crewman likes cooking.

with the O-in-C becoming operations officer.

(In the case of Selected Reserve DDs, however, the active duty CO and XO would be reassigned after an adequate turn-over period.)

This new concept in the Naval Reserve training program enables the officers and men to drill in the ship to which they are assigned for mobilization purposes. They also undergo their annual active duty for training (AcDuTra) on board their Selected Reserve ship.

From all accounts, the Selected Reserve concept is proving to be highly effective — both from the standpoint of training potential and from the standpoint of morale.

One of *Blackwood's* Reservists, Robert E. Martino, RDSN, says, "The Selected Reserve is the best thing yet. You really get the feel of the ship on these weekend cruises." The Regulars are "gung ho" about the setup, too. S. E. Joseph, RD2, USN, leading PO in CIC, reports that the Reservists really apply themselves. "What you tell 'em sticks with 'em, too," he says. "You don't have to teach them the same things over and over each time we take the ship out."

The members of the Selected Reserve crews are handpicked from the start. Most of them come from Naval Reserve Surface or Fleet Divisions. Every effort is made to provide the highest caliber personnel possible. "Fair weather" Reservists need not apply—men who skip drills or do not perform their duties satisfactorily are dropped.

Morale in *Blackwood* is very high. Just before the Reserve crew secured from the cruise described, word was passed that volunteers were needed for a special cruise the following weekend. The ship had been invited to take part in a pier dedication ceremony at a nearby port. There was no shortage of volunteers.

The esprit de corps in the Selected Reserve program is a natural result of the Reservists' having ships they can call their own. Before the traditional Navy Day celebration, *Blackwood* held a special open house for the families and friends of the Selected Reserve crew. Plans were made to have a caterer provide a buffet for the visitors, but the Reserve commissarymen insisted on preparing the buffet themselves—even though it meant an extra weekend without pay.

BACK IN BLUES—Selected Reserve crew of *USS Blackwood* musters topside on fantail before securing from weekend cruise that took them out into Atlantic.

This idea of working extra hours isn't confined to special cruises or parties, either. A number of the Reservists come to the naval base on off weekends or week nights to "get a little necessary work done before our next cruise."

The first time a group of Reserve petty officers assigned to *Blackwood* attempted to get some extra work done they ran into difficulties with the naval base's strict Marine security force, since there was no drill scheduled. It wasn't long, however, before 4ND headquarters got the matter straightened out, and the Reservists were able to accomplish their "mission."

Blackwood's theme is currently being repeated, with certain variations, on 34 Selected Reserve ships located at various ports in the First, Third, Fourth, Fifth, Sixth, Eighth, Ninth, Eleventh, Twelfth and Thirteenth Naval Districts.

These Selected Reserve crews are well on the way toward fulfilling their mission—to be trained, ready and available for "immediate employment in the active forces . . . upon the initiation of hostilities."

ALL ASHORE—Reservists leave their ship after two-day cruise feeling they are ready to report to duty and man their stations in event of an emergency.

YANKEE STYLE—Lowell, Mass., reservists have million-dollar drill center. *Left:* Telephone talkers are trained.

Sailors with a Yankee

UP IN MASSACHUSETTS, where the Merrimack and Concord rivers meet, stands the city of Lowell—sometimes called the "Venice of America." When you cross the Merrimack by way of the Pawtucket Street Bridge, turn left onto Pawtucket Boulevard to Bedford Avenue, turn right and stop in front of three connecting quonset huts, you'll find yourself at Lowell's Naval Reserve Training Center.

At this place you'll hear words like "park," "hard," and "car" pronounced in a manner the likes of which you've never heard before—unless you're from New England.

But the stationkeepers in Lowell aren't interested half so much in how they pronounce their words as they are in how they get the word across. Their job is training—training young Naval Reservists in the why's and wherefore's of the Navy.

This million-dollar Center was completed during November 1947. It was occupied then by the units still drilling at Lowell—Naval Reserve Surface Battalion 1-10, which is made up of Naval Reserve Surface Divisions 1-18 and 1-19. But the establishment of a Naval Reserve in Lowell, like the city itself, goes back into the pages of history.

When a new man comes to this training center for an interview or a "look-see" before joining, he is interviewed for desirability, qualification and moral character. He takes an AQT (Applicant Qualification Test), is examined physically and is processed for enlistment.

Before he is sworn in, a date is pre-set by the man, stating when he will start his two years of active duty. This date is usually a year after enlisting. If still in high school, he is encouraged to remain there until he is graduated.

On the night he is to be sworn in, his parents are invited to attend. They watch as their son stands before the Division which has been brought to attention. During formalities, the commanding officer administers the oath, the young man is congratulated and he is in the Naval Reserve. He is given a choice as to which Division he would like to join and which night he would like to attend. Usually, he has talked to some of his friends who are already Reservists attending drills.

THE STORY of the NRTC at Lowell is similar to that of hundreds of other Reserve training centers throughout the country.

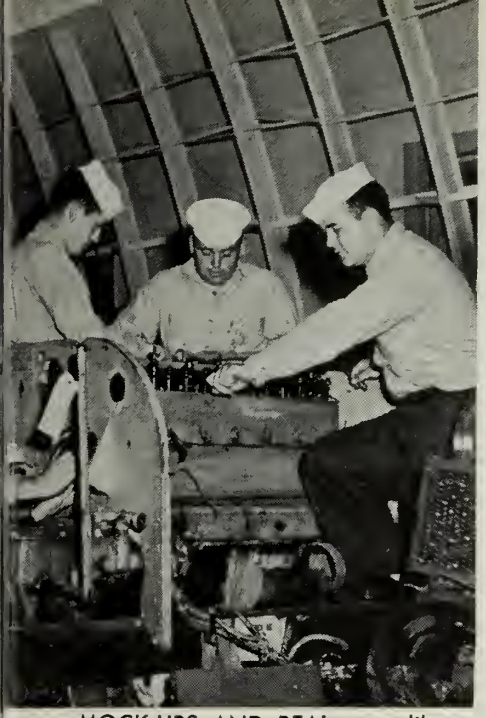
The post World War II Naval Reserve was formed in Lowell in October 1946, with administrative office space in the City Hall and drilling headquarters at the Lowell High School (about three miles from the present Center).

Division 1-18 was activated on the same date and enrollment in the unit was so rapid that Division 1-19 was established the following month to take care of the overflow. The Commandant of the First Naval District commended the commanding officer (then Inspector-Instructor) on the achievement of having the first Battalion in the District to reach full strength.

By reaching full strength, the Divisions could go on selective recruiting, taking only those ratings authorized in their allowance. Intra-divisional transfers between units in other cities, and normal attrition, soon brought both Divisions to authorized strength by the ratings allowed.

The outbreak of the Korean conflict saw approximately 98 per cent of the petty officers and 70 per cent of the non-rated personnel of both Divisions ordered to active duty.

Post-Korea recruiting was a slow and painstaking process that eventually paid off with the two units reaching authorized strength again during March 1954. Permission was granted by the Commandant to recruit up to 25 per cent in excess.



MOCK-UPS AND REAL gear like engines (left) and ASW room (right) prepare Reservists in their Navy specialty.

Twang

In August 1955, with the passing of the Armed Forces Reserve Act, recruiting slowed down, but Lowell buckled down to the task and emphasized the enrollment of veterans as a solution to this problem.

EACH NEW RECRUIT gets the opportunity to poke his head into the different classrooms to see what he's getting into. Usually, he is taken in tow by the leading chief at the Center, J. L. Griffin, ENC, who has a little over 20 years in the Navy. While making the grand tour, Chief Griffin leads the new man through four rooms which are connected by telephones where talkers are going through a damage control problem.

They amble on past the examination and communications rooms into the machine and engineman shop where Reservists are working over a refrigeration unit. "This unit," explains Griffin, "like most of the gear used for training, can be set up by the instructors to create 'bugs' which the trainees must trace, check and fix." Then he points out that in this same shop, engines are torn down and fixed up. There is also a mock-up of an AM and FM radio which can be bugged and fixed.

The Reservists have a well-equipped shop with many tools to

NAVY SCHOOL HOUSE—Reserve training at Lowell goes back past center built in 1947. *Below:* Inside center, Reservists use plots to solve ASW problem.

FULL THROTTLE—Part time Navymen man their typewriters during speed drill designed to train yeoman strikers at the Lowell Naval Reserve Training Center.

help them do their job. These tools include drill presses, milling machines, shaper, lathes, grinders, both wood and metal saws, electric and gas welding equipment, arbor presses and the regular run-of-the-mill tools which come in handy while trying to loosen a stubborn bolt.

Griffin, pulling on a cigar, opens another door to where there is a mock-up of a destroyer boiler front. This, like everything else, is used for training. The room also contains a generator, battery charger, gauges, rotors for pumps, diesel air compressor, turbine, and a fuel or lube oil purifier.

The ASW room is set up in much the same manner as one you would find in a destroyer. From here, targets are created and a small group huddles over an eerily-lighted table to plot them in on status boards. The CIC is connected to the ASW room. Here there are radars and more plotting boards. It is also from here that the SM40 (battle circuit) is operated. This radio telephone simulator sets up communications on a team training basis and can be used to call and drill all stations through the Center.

Before he's through with the brief introduction to the rooms he's already seen, including the ET storeroom, training aids, the personnel, training and cruise offices, the young recruit's head is spinning. And he wonders if he'll ever get it all down pat. He's assured by Chief Griffin that not only will he understand all that he's seen but much more besides.

THE NEW RECRUIT reporting to the Lowell Center quickly finds out that he has quite a record to uphold. Surface Division 1-18(L) (for large) placed first in the District Surface Program competition for fiscal years 1955-56 and '57, topping 36 other Surface Divisions in New England. Division 1-19(L) placed within the top five in each of these same years. In the 1955 nation-wide competition, involving 574 divisions, 1-18 placed third.

But winning trophies is not a new experience for the Lowell Naval Reserve. The pre-World War II Lowell Unit (Naval Communications Reserve Unit 5) set an enviable record in winning the First Naval District, Section Three, Military Competition for the years 1935, '36, '37, '38, '39, '40 and '41.

The young recruit absorbs all of this historical lore and quickly finds his niche in the training program. He also raises the question of pay.

The pay that Reservists get for attending drills one night a week ranges from $2.77 for an E-1 with less than two years to $32.83 for an O-6 with over 30 years of service. These figures are based on monthly pay divided by 30. They get paid from ComOne in Boston once a quarter or, when aboard ship, they get paid while on board.

Close to 300 of the Lowell Reservists turn some $200,000 of their Navy pay each year into the coffers of Lowell. And the people of Lowell visit the Center during "Open House" sessions to view the work being done by the Reservists. At times, especially around Christmas, the Center acts as host to children from a local orphanage.

Other civic duties involve the establishment of teams to be used, within minutes' notice, in case of a local disaster. During the tornado which struck Worcester, Mass. (about 45 miles from Lowell) in 1956, Reservists from that city used Lowell's mobile communications truck which is equipped with transmitters and receivers. This same truck is used in conjunction with the Lowell civil defense.

ON HIS FIRST DRILL NIGHT, the new recruit is given a check-in slip which takes him through all departments and into his Division. He's administered his first shots, sized up for uniforms, interviewed by the active duty for training officer. At this time he signs up for a future schedule of two weeks' recruit training at Great Lakes, Ill. The date selected is normally after 10 weeks of recruit training in the Division. This gives him time to gather more than an inkling of what to expect when he gets to Great Lakes.

He goes to the classification office and is given the battery test (GCT, etc.), and interviewed. After classification the man visits the Center's library where he draws three books —*Bluejacket's Manual*, *Here's Your Navy*, and *The Recruit Workbook*. He is then assigned to a seaman recruit class.

During the 10 weeks before the new seaman recruit goes to Great Lakes, he learns how to stencil and wear his uniform properly, recognize an officer and render a salute. He is taught the fundamentals of standing at quarters, muster, manual of arms and other military duties. This is done by classroom instruction, the use of training aids and by actually doing.

At the end of this time, unless he is completing a school term or if working conditions don't permit, he goes to Great Lakes to get his two weeks' indoctrination.

This indoctrination enables him to absorb the classroom instructions which he will receive at the Naval Reserve Training Center and to prepare him for the Seaman Apprentice examination. These examinations are administered periodically to determine the recruit's progress. Examinations come from the Naval Examining Center at Great Lakes and are controlled by the District Commandant and administered by the local commanding officers of the divisions. The time between SR and SA is nine months; SA to SN, nine months and SN to PO3, 12 months.

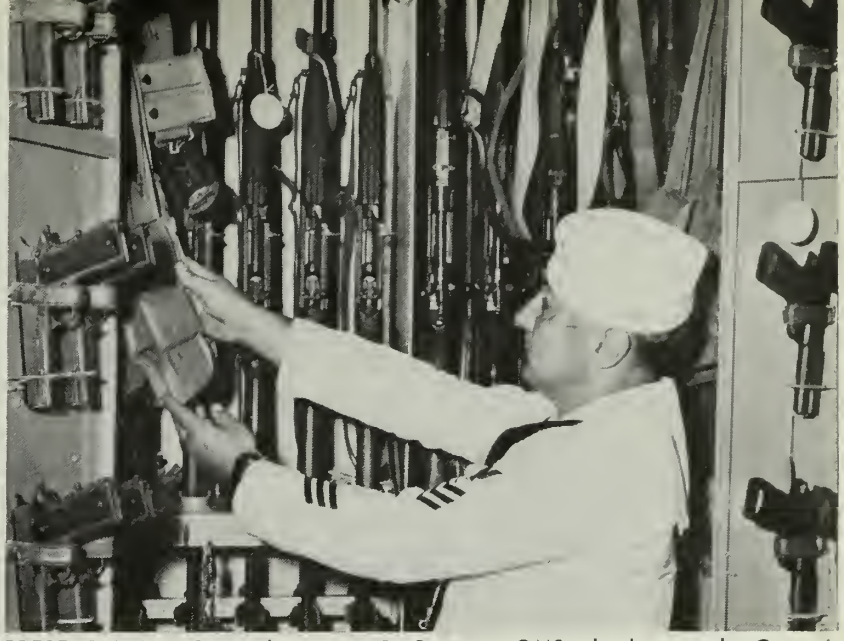
TRAINING CONTINUES during the second year with the man going for SN or FN and taking his selected two weeks' active duty at sea aboard any Fleet type ship or Reserve training ship. This sea duty is important inasmuch as the man is examined in practical factors which cannot be accomplished at the NRTC for advancement in rating.

Lowell units have taken advantage of training at sea together on several occasions. The battalion commanding officer and a number of the division officers and chief petty officers go on these cruises to assist the ship's officers.

The training center at Lowell, with no access to the sea or other navigable waters, has attempted to overcome a lack of everyday sea duty training by building a training ship mock-up. The mock-up, built by station force and divisional personnel on training duty, was completed on a "no cost to the government" basis. Men experienced in the art of "cumshaw" exceeded themselves in the procurement of materials and equipment to complete this project.

The mock-up, called "USS *Land-Locked*," is a planked-deck affair mounted on telephone pilings. It is approximately 60 feet long with a 15-foot beam. A 35-foot mast has been stepped. It is equipped with a nine-foot square hatch with removable cover, life lines, bitts and cleats. Pilings have been sunk to simulate dock bollards.

Another type of training set up adjacent to the ship mock-up is an old septic tank which has been half sunk and used as a training aid for fire fighting instruction. Oil fires are lighted off in the tank and Reservists, in teams, take turns putting them out with the use of fog and foam.



PRESENT ARMS—Stationkeeper R. G. Groteau, GM1, checks over the Center's armory. The firearms are used for security, training and familiarization.

Multiple drills afford the Reservists an opportunity to get in some practical training in line throwing, line handling, rigging and fire fighting.

Recreation at the Lowell Center has not been overlooked. In the wooded area at the rear of the Center, a section of brush has been cleared and graded and a large fieldstone fireplace with built-in oven and barbecue pits have been built. Tables, kettles and coolers of the shipboard type were procured from salvage. With the exception of the mortar used in the construction of the fireplace and pits, everything else for this project was again "cumshawed."

Training Reservists is a full-time job. And the job of training Reservists in Lowell is in the hands of one officer and 10 members of the stationkeeper staff.

The training methods in Lowell aren't much different from those at Centers in California or Texas or Oregon or Minnesota. The only real difference is that in Lowell it is flavored by a sprinkling of that good old Yankee twang.

—Tom Wholey, JOC, USN.

'NOW READ THIS'—Center's library keeps supply of book knowledge on hand. Here recruit is given the three basic books that he will need to study.

HILO HALL — Pearl Harbor Reserve Seabees load equipment in LST. *Rt. and Below:* Reserve training builds drill hall.

Civilian Seabees 'Can Do' Too

THE CAN DO spirit that carried Seabees during World War II through one of the biggest building booms in history still exists. This item involves the construction of a king-sized quonset hut.

Naval Reserve Electronics Division 14-1 located at Hilo on the island of Hawaii was in need of a place where Reservists could attend drills. It just so happened that two Fourteenth Naval District Seabee Reserve units in Pearl Harbor were set to take their two weeks' training duty.

Putting active duty time to good use by on-the-job training, members of Naval Reserve Construction Battalion 14-1 loaded supplies aboard uss *Saline County* (LST 1101) in Pearl Harbor and left for Hilo. They unloaded the supplies, surveyed and cleared a wooded area, poured the foundation and erected structural ribs for the hut.

The second unit, Naval Reserve Construction Battalion 14-2 flew to Hilo and used their two weeks to finish the job.

The completed 40-by-140-foot building contains a drill hall, four classrooms, an administrative office and a dispensary.

Hilo now has a place where all can drill — compliments of the Seabee Reserves.

RESERVE FOR RESERVE—Sign marks location where Seabees built Reserve facility. Left: The finished product.

AWARD WINNERS in Navy's Science Cruiser program go to sea on submarine and (*right*) try out a Navy space suit.

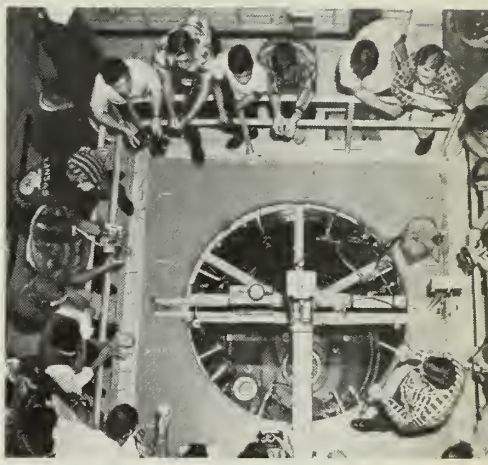
Tour with Navy Science Cruisers

Some of the most talented young scientists in the country took a good, hard look at the Navy recently when, for a week, they were guests of the Chief of Naval Operations aboard naval ships and stations. They liked what they saw.

As award winners of the Navy's Science Cruiser program which, in turn, is sponsored by the National Science Fair, 81 of the contestants visited the Atlantic Fleet (Boston and Norfolk areas) and 69 were guests of Commander First Fleet, San Diego. The science program is designed to foster the interest of students all over the country. For many, the spur was a prize offered by the U. S. Navy—a week as CNO's guests and a chance to see what the Navy looks like. These winners were Navy Science Cruisers.

The West Coast tour indicates what they saw:

- A demonstration scramble of F4D *Skyray* interceptors from VFAW-3, the Navy's squadron serving with the Continental Air Defense Command.
- A tour of USS *Kearsarge*.
- A visit to North Island's Physiological Training Unit and Pressure Suit Training Unit. Here, eyed by his envious fellow potential scientists, one lucky fellow tried on an omnienvironmental space suit, designed for flight above 50,000 feet. Others got the feel of an ejection seat mock-up; still others sweated out the Unit's pressure chamber.
- Two days devoted to cruises aboard three submarines and two escort vessels: USS *Queenfish* (SS 393), *Bugara* (SS 331), *Remora* (SS 487), *Wiseman* (DE 667) and *Lewis* (DE 535). Expenditure of film surpassed previous days. No seasickness reported.
- A showing, discussion and question/answer period of the "Sea Power" presentation. The First Fleet officers conducting the presentation staggered out of the conference room some time after midnight, hoarse and glassy-eyed.
- A day's tour of civilian industry in the San Diego area devoted to research problems and guided missiles.
- Inspection of an operating atomic reactor.
- A swim session in the waters of the Pacific Ocean at LaJolla.



- A tour of the Scripps Institute of Oceanography.
- An inspection of the Navy Electronics Lab at Point Loma.

Loud snores of the youthful scientists on the homeward-bound Naval Reserve planes pointed up the fact that they had had a busy time on their Navy cruise.

YOUNG SCIENTISTS visit atomic reactor and (*below*) visit the Navy Electronics Laboratory while they are on tour as guests of Chief of Naval Operations.

AROUND

SILKS, SPICES, CAMEL SADDLES and tastes they missed overseas were the tour targets for a group of Navymen from USS *Rankin* (AKA 103) who went ashore to discover New York City. Here, gifts they had bypassed in foreign markets were found to be in just as colorful a setting as in the old world.

FAMILIAR sight in NY harbor was beginning of one-port, world-wide tour.

OLD-WORLD-STYLE market added to men's interest while shopping in NYC.

RANKIN sailors visit shop in Syrian-Lebanese community while in Brooklyn.

KOHL ISHKOR, Arabic pastry, is enjoyed by men who had missed this

CHARTING 'WORLD CRUISE'—Liberty party from *USS Rankin* (AKA 103) stops in front of Woolworth building to get their bearings while sightseeing in NYC.

THE WORLD IN ONE PORT

NYC is like most big American cities that have large concentrations of nationality groups, except that New York has more. Men of *Rankin* as shown in the photographs on these two pages, found their way through Chinatown (Pell Street), had lunch and shopped in a bit of Naples only one street away (Mott Street), crossed the Brooklyn Bridge and visited an Arabic section (Atlantic Street), then traveled through the Greek, Ukranian, Polish and German sections.

Back on their ship after cruising around the world in New York it was hard to realize that they had just left the Hudson River behind.

DOWN BEAT—Navyman gets word on how to beat and snap desert drum.

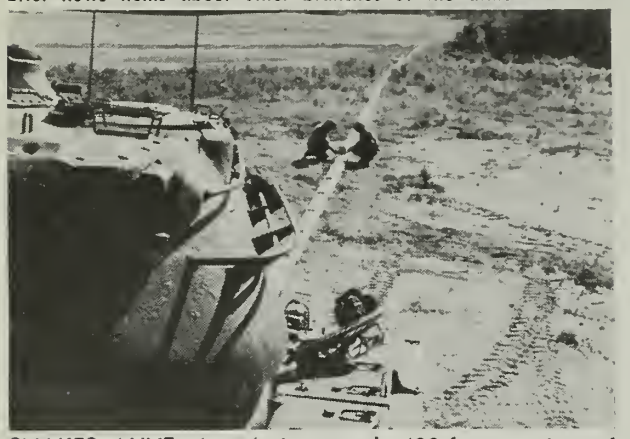
BRIGHT spot of the tour was Times Sq. It was like other cities, only more of it.

FLIPPER—*Rankin* men watch techniques in pizza pie-making during stop to eat.

treat abroad. Translation of the pastry's name is 'eat and thanks.'

SOUVENIRS APLENTY—Hong Kong gifts that were passed up while visiting the Far East because of time or shipping problems could be purchased at leisure.

Brief news items about other branches of the armed services.



SNAKES ALIVE—Army's improved, 400-foot version of *Snake* used to blow mine field when triggered by bullet.

A NEW SNAKE, up to 400 feet long, to be used for clearing the way through land mines, is being tested by Army troops in the field.

An improved version of a World War II device, the "Snake" consists of a series of prefabricated sections that can be moved to an assembly point by truck. After assembly, which has been speeded up through various improvements, the unit is towed by tank to a minefield. There, it is pushed over the field and detonated to clear the area of mines. One complete 'Snake' is 400 feet long.

The new device is being developed by the Army Engineer Research and Development Laboratories at Fort Belvoir, Va. Since it utilizes specially designed charges in place of the type used on the old model, it gives improved mine clearing performance with less explosive. A special system of free-sliding internal pushing bars transfers the pushing force of the tank from a unique tail section directly through the structure to the nose section so that the nose actually pulls the rest of the Snake along.

The explosives in the sections are detonated by firing a machinegun from the tank into a bullet-sensitive fuse.

The structure is made of extruded aluminum.

★ ★ ★

THE AIR FORCE is using a new beacon signaling system so that fuel-thirsty jet aircraft and their giant jet tankers can find each other automatically at high altitudes. It is being used on B-58 jet bombers and KC-135 tankers.

The beacons transmit and receive frequency-coded signals that electronically provide the range and bearing of each aircraft. The signals sent by one airplane's beacon are received as blips on another's radar screen.

In the refueling operation both the bomber and tanker use beacon transmitters to send out the coded signals in all directions. When these impulses appear as easily identifiable blips on the radar screens in each airplane, the pilots set their courses and ride the beams toward each other.

Radar gives them the exact position of the aircraft they're trying to find until the two planes are close enough to begin the actual aerial refueling.

PROGRESS AND THE MACHINE AGE have more or less teamed up to eliminate the human element in plane spotting. For the past nine years, the Ground Observer Corps has been a vital part of the Air Defense System. It was scheduled for inactivation last month. The GOC consisted of some 280,000 civilian volunteers who dedicated time to man some 16,000 observation posts and 30 filter centers throughout the country.

The system the Corps used to receive, process and transmit its air defense information has come to the end of the line. It had reached a point where it was unable to keep pace with the increasing speeds of bombers and weapons systems now being used in air defense.

The efficiency of the air defense radar net now in use gives increasing assurance to air defense authorities that an enemy strike can be detected and identified before it reaches the continental United States. The Air Force says that it is so efficient that it no longer requires human back-up.

The new semi-automatic ground environment (SAGE) system, with its lightning-fast computation of data and its memory and storage capacities, is already taking over many of the time-consuming processes of the manual operations of the past.

★ ★ ★

A PHOTOGRAPHIC DEVICE which uses the "heat" or infrared radiation sent out by an object has been developed as a night vision aid under the sponsorship of the Army's Engineer Research and Development Laboratories.

Unlike conventional photography, which requires sunlight or artificial light to produce an image, the "Thermograph" depends solely upon radiation from the person or object on which it is focused. Since these radiations are present night and day, it can operate in total darkness.

The Thermograph is expected to provide a means for night reconnaissance, terrain mapping and target location. Another military use may be the detection of camouflage.

UP THE HATCH—*Nike-Hercules* guided missile is backed into plane as part of Army's traveling air defense system.

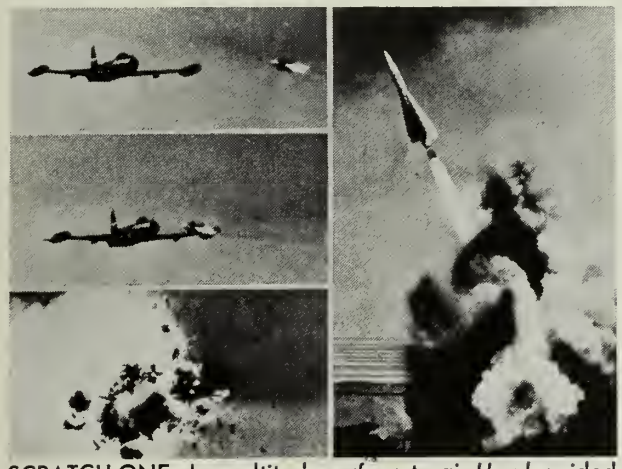
A REVOLUTIONARY "FIRST" in military logistics—a system for delivering supplies by ballistic cargo missile —has been developed for the U. S. Army.

The missile, called *Lobber,* can deliver rations, ammunition, medicines, communications equipment or other vital supplies accurately and in quantity to front-line troops, wherever and whenever needed.

It is also adaptable to offensive weaponry, carrying payloads of napalm, chemicals, high-explosives or small nuclear warheads, and has other uses in military engineering and communications.

Quick-disconnect *Lobber* payload sections can be pre-loaded at supply depots and at least 70 per cent of the missile recovered for later use. Normally, however, it would be an expendable item of equipment.

The missile and its launcher can be hand-carried, if necessary, by a team of three men in the field.



SCRATCH ONE—Low-altitude surface-to-air *Hawk* guided missile hits target. It can be used with combat troops.

SPOTTING AND TRACKING nuclear clouds with a relative degree of accuracy by means of radar may now be possible.

Tests made by the U. S. Army Signal Corps show that the Army's advanced weather radar systems, ordinarily used to detect storms and aid in forecasts, may also help warn soldiers and civilians on probable areas of radioactive fall-out from nuclear explosions.

During the tests, the first photographs of a radarscope showing the nuclear mushroom were made with a special camera. Successive film exposures showed the formation, rise and drift of the characteristic cloud. The nuclear clouds were measured for size and tracked for two hours.

Information on the height and drift of the radioactive clouds would provide fall-out warning to troops on atomic battlefields. This information could be equally valuable for civil defense.

Even if all local communications were to be knocked out in the area of an explosion, the long-range radar directed at the probable areas from a safe distance could locate the center of the blast. This information would help determine which areas, if any, should be evacuated because of the possibility of later fall-out. By the same token, safe areas for receiving evacuees could be marked.

The radar used in the tests is the same type used to detect the approach of rain, snow, sleet, electrical storms, hurricanes and weather fronts which might build into tornadoes.

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RESPONSIBILITY for the scientific satellite programs, lunar probes and rocket engine development, formerly conducted by the Army, Navy and Air Force, has been assumed by the National Aeronautics and Space Administration.

The nation's new civilian space agency was activated on 1 Oct 1958, as an independent government agency. It was authorized by an Act of Congress and placed in operation by an Executive Order.

Among the projects which the National Aeronautics and Space Administration (NASA) has taken over are:

- The U. S. Scientific Satellite Project (Project Vanguard).
- Four lunar probes and their instrumentation, and three satellite projects. The satellite projects call for putting into orbit two inflatable spheres—one 12 feet in diameter, and the other 100 feet in diameter—and a cosmic ray satellite.
- A number of engine development research programs in such areas as nuclear rocket engines, fluorine engines, and the million-pound thrust single-chamber engine study, and development.

In addition to these undertakings previously assigned to the military departments, NASA has absorbed the National Advisory Committee for Aeronautics, a civilian government agency devoted for the past 43 years to aeronautical research.

The armed forces, working in cooperation with the new civilian space agency, will continue to pursue space projects, but in areas which relate to weapons systems for the defense of the United States.

These include anti-missile defenses, solid propellants, advance warning, navigation and communications systems, meteorology and other military space programs.

BIRD DOG—USAF's *Bomarc* interceptor missile blasts off to target area guided by SAGE ground control unit.

LETTERS TO THE EDITOR

Applicant for Commission

SIR: According to BuPers Inst. 1120.18E, chief petty officers and below in the Regular Navy, who have four years' service and meet the other requirements, are eligible for the Integration Program.

Does the entire four years have to be in the Regular Navy, and do I need four years at time of application or at time of appointment?

The age requirement is something else again. Do any of the officer procurement programs which have low age limits deduct the applicant's military service from his age in order for him to meet the age requirements?

How many naval aviation cadets come from enlisted status as described by BuPers Inst. 1120.20A?—E. A. L., SK2, USNR.

• *As an applicant for the Integration Program, you must have four years of continuous service in the Regular Navy on 1 April of the year the appointment is tendered, not the year of application.*

So far as age requirements go, the OCS Program, which is also open to civilian college graduates, does allow a maximum of 36 months for previous military service. No age deduction for years of service is made. however, in the Integration, LDO, WO, or AOC/NavCad Programs.

At present, approximately 30 per cent of all new NavCads are from enlisted status. Normally, at least 20 per cent of flight training input are enlisted men.—ED.

Monkeyshines No More

SIR: Your October 1958 issue contained a letter to the editor asking what happened to a pet monkey that was on board an LST moored alongside USS *Firedrake* (AE 14) at Okinawa during World War II.

I was First Lieutenant of *LST 267*, which spent many uncomfortable hours near that ammo ship. Our mascot was probably the one described in the letter.

Though many of the crew found the monkey entertaining and companionable, others were somewhat less than fond of him. I guess you could say he was always up to "monkey business."

Shortly after the war, while the ship was moored in the Whangpoo, the monkey failed to make the morning muster. It was generally believed that someone returning to the ship had caught our mascot going through his locker and had donated him to a passing sampan. Our skipper heard from him for a while, and we now think he is performing his monkeyshines somewhere in China.—George Cole, LCDR, USN.

SIR: It was during a night alert on Okinawa. Overhead, the sky was bright with starshells and the lights from batteries following enemy aircraft.

In our camp between Yontan and Kadena airfields we were watching the show when something scurried by not 10 feet from me.

In the eerie light the form took the shape of—of all things—a monkey. I started to call the attention of the others around me to this—well, maybe it was an apparition. But, after deciding that my eyes might be playing tricks on me, I clammed up.

About four seconds later two men charged up, asking, "Did you see it?"

"See what?" said I.

"The monkey," they chorused.

Next morning I asked the boys if they had found the simian, but he had completely disappeared.

Could this have been the monkey mentioned in your October letters to the editor?—C. A. Whyte, CAPT., CEC, USNR.

• *Well, as we've said many times before, "When in doubt, ask the readers of* ALL HANDS."

From here, it certainly looks as if LCDR Cole's candidate is the animal in question.

As for the one CAPT Whyte saw, we're afraid establishing its identity might be too big a job even for the readers of ALL HANDS.—ED.

This section is open to unofficial communications from within the naval service on matters of general interest. However, it is not intended to conflict in any way with Navy Regulations regarding the forwarding of official mail through channels, nor is it to substitute for the policy of obtaining information from local commands in all possible instances. Do not send postage or return envelopes. Sign full name and address. Address letter to Editor, ALL HANDS, Room 1809, Bureau of Naval Personnel, Navy Dept., Washington 25, D. C.

Somebody's All Wet

SIR: In reference to your article on page nine of the August issue: "Finally the bugle sounds 'Swim Call' and 3000 carrier men dive into the blue waters . . ."

Just one question: WHO'S TENDING THE STORE?—W. Thompson, LCDR, USN.

• *Iron Mike, of course.*—ED.

Cavemen Weathermen

SIR: Your article on the Fleet Weather Facility, Yokosuka, Japan, on page 37 of the October issue of ALL HANDS was most interesting.

Just for the record, however, the Fleet Weather Central, Yokosuka, was established on 1 Oct 1952, not in 1951 as you stated. At first, operations were conducted in a cave. The imposing edifice pictured in your article came later. In the cave the weathermen could see nothing of the outside, and on occasion, not even each other during the frequent power failures.

The move to the building on the hill was accomplished during a heavy rainstorm on Thanksgiving Day, 1952. Since the road up the hill was under construction, the transfer of tons of equipment, including large plotting desks, instruments and cabinets was made by highline over the cliff shown in your photo, all the way to the top veranda of the building.

Not a single item was broken or damaged. The move was so well coordinated that none of the scheduled Fleet weather broadcasts was interrupted.

In addition to the vital weather warnings received, the Fleet became aware of this activity during the Christmas holidays when a giant display of Christmas lights in the shape of a Christmas tree served as a beacon to ships returning from the Korean area.

The personnel assigned to the Weather Central were so outstanding that the only mast conducted during the first nine months of operations was a commendatory one, recognizing the efforts of a number of key personnel.—Captain Robert J. Williams, USN.

• *Thank you for the interesting sidelights on Yokosuka. We depend largely on contributors for the facts contained in many of our articles.*—ED.

Non-Regulation Ribbons

SIR: Some time back a Bureau order came out making the plastic covered campaign ribbons non-regulation. I was wondering if there was any explanation you could give—R. D., EN1(SS), USN.

• *Plastic-covered ribbons are considered to present an inferior appearance. That's why they are not now authorized, nor have they ever been. The use of these ribbons became prevalent during World War II, and a reminder was issued that they were not regulation. And they aren't now.*—ED.

Modification of Orders

SIR: Before my ship departed for the Antarctic, I had orders to shore duty as an instructor at class "A" Radarman's School, San Francisco. I have been aboard this ship for 58 months. Only 18 months are required in my rate to be eligible for shore duty.

Soon after I received these orders and before we left the States, the yeoman told me I had been "frozen" on this ship until after the cruise to Antarctic.

I can't get over the feeling that this is unfair and unjust. Can you cite me some justification or precedent for the Navy's doing this in peacetime?—R.L.M., RDCA, USN.

• *In your particular case, Chief, you were not "frozen" aboard your ship at all. That was a bad choice of words on the part of the yeoman. The commanding officer wouldn't even have had the authority to keep you aboard so long as you had Bureau orders.*

The record shows that your commanding officer felt that you were needed on board for the cruise to the Antarctic and asked the Bureau to modify your orders. You originally had orders to come ashore in December 1958. They were modified to bring you ashore in March 1959, a matter of four months. This was a routine modification of orders; something you have probably come across other times during your Navy career.

There's another way a person can be kept on board over his tour. When a rotation data card is submitted, there is a place for your commanding officer's remarks. If for some reason he needs you on board for a particular assignment, he could state this under "Remarks." This doesn't necessarily mean it will be done; that's left up to the Bureau.—ED.

BABY, IT'S COLD INSIDE—*USS Rigel* (AF 58) steams through the sunny Mediterranean to deliver her cargo of frozen foods to other ships of the Sixth Fleet.

Recruiting TAD

SIR: The subject of travel expenses and transfers within a recruiting station or sub-station area has come up during conversations many times at this recruiting station.

It is our understanding that orders to a particular sub-station are permanent. Can a person be ordered to duty elsewhere in the sub-station area at his own expense? Can he even be ordered to perform TAD within this same area at his own expense?—G. H. W., EN1(SS), USN.

• *You're right about orders to a sub-station. They are permanent. Any assignment beyond commuting distance of your assigned duty station is a permanent change of station and can only be effected on authority from the Chief of Naval Personnel.*

So far as TAD is concerned, you cannot be ordered or directed to perform such duty at your own expense. In many cases there is a serious shortage of government vehicles for transportation. Even under such circumstances, you cannot be directed to use your own car. Use of your privately owned vehicle can be authorized, but never directed. When authorized, and if you choose to use it, you can be reimbursed at the rate of eight cents a mile for travel within the city limits of your station and seven cents a mile for travel beyond these limits.—ED.

Bill of Exchange Recalls Navy of Not So Long Ago

SIR: This is a reproduction of a paper I have just run across. On the back of it there is an endorsement by an Admiral Crowninshield.

I wonder if you could tell me what it is and how it was used.—M. J. Munchel, Harrisburg, Pa.

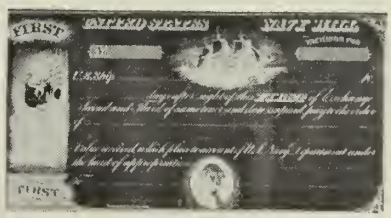
• *Thanks to our friends the experts, in this case the Naval History Division, we can make it look as if we know all the answers. This time Miss F. E. Sharswood of the Early Records Branch, Naval History Division, solved the mystery for us.*

She says your paper is the third copy of a bill of exchange drawn upon the Navy Department's fiscal agents in London, England. It is made out in favor of Rear Admiral A. S. Crowninshield, USN, Commander-in-Chief of the European Squadron. The bill seems to be dated 6 Jun 1902. At that time Crowninshield's USS Illinois, was at Castellammare, Sicily.

These bills, drawn upon the Fiscal Agent, were used by pay officers to obtain funds while their ships were on foreign stations. The fiscal agent did not make requisitions for money. Instead, the Secretary of the Navy, by warrant on the Treasury, usually made monthly advances to him so that he could keep a balance on hand to meet the pay officers' drafts.

In other words, the bill of exchange was a sort of check drawn upon the Navy's "bank account" with the fiscal agent.

During her research Miss Sharswood found a blank set of these bills in the files of the Secretary of the Navy. The fact that there were three bills to a set should serve to remind all of us that making things out in triplicate isn't a newfangled idea.



Here's some additional information on Admiral Crowninshield which we dug up for ourselves.

The admiral was born in 1843 at Seneca Falls, N. Y., and graduated from the Naval Academy in 1863. In the Civil War he saw action in the attacks on Fort Fisher, N. C., in December 1864 and January 1865.

By 1894 he had risen to the rank of captain, and on 17 Sep 1895 (at the commissioning ceremony) he took command of the brand-new USS Maine. He remained her skipper until April 1897, when CAPT Charles D. Sigsbee, Maine's second and last commander, relieved him.

During the Spanish-American War Admiral Crowninshield was a member of the Board of Naval Strategy. After that he saw service as Commander-in-Chief of the European Squadron and as Chief of the Bureau of Navigation (now BuPers).

He retired in 1903 and died in 1908.—ED.

About That Article We Submitted for Publication

SIR: We read with interest your September issue, especially the Way Back When on "Perry's Crewmen at Naha" [by LTJG R. K. Gremp].

We of Patrol Squadron Four have been stationed at Naha, Okinawa, more than two years now, and we're proud of our many accomplishments. Yet, there are many who know nothing of our existence on this small, but strategically important, island.

It was, then, with disappointment that we noted you did not use the photographs we submitted with the article, and you left out the part of the story mentioning Patrol Squadron Four's salute to the Navy dead on Memorial Day, 1958.

It has been our understanding that it is your policy to give credit to a unit that supplies you with newsworthy material.—P. A. M. Griber, CDR, USN, CO, Patrol Squadron Four.

• *We're glad you indicated your feelings about the treatment given your article because this gives us an opportunity to clear up several points concerning the submission of material to us, not only by your unit but others throughout the service (and we're very happy to get them).*

First of all, there's the matter of deadlines, and what we call "lead time." Pictures and stories which appear in any monthly magazine must be ready to send to the printer well in advance of publication date. ALL HANDS' *lead time, for example, is usually two months. This means that our deadline for a Fourth of July story, let's say, is 1 May. Thus, you would have to have your story concerning a Fourth of July event in our hands* before *1 May. Generally a ship or unit gets around to sending such a story about the middle of July, in which case the earliest it could appear would be September. The best we could do, if the material warranted it, would be to hold the article or the photos for the following year. We do this very often.*

Now, about your original story. In checking back, we found the date 21 May 1958 pencilled on the release you sent us. So far as we can tell at this time, that's the date we received it.

By 21 May, our May issue had been printed and distributed and eight or nine of the 10 readers for whom each copy is intended had, presumably, seen their copy. Our June issue had been put to bed and we were approaching the July deadline.

We're sure you will agree that a Memorial Day (30 May) story wouldn't go over so well in July. As you will recall, the greater part of your unit's release concerned Perry's visit to Okinawa in 1853. Under the circumstances, we decided to hold it for eventual use as a historical feature. That's how it wound up (minus the portion concerning Memorial Day) as a Way Back When in the September issue.

Our second point concerns the matter of editorial judgment, a privilege to which we jealously cling as our exclusive prerogative.

Your release consisted of 44 typewritten lines, 41 of which were dedoted almost exclusively to Perry's visit. Patrol Squadron Four was referred to in a three-line paragraph at the end of the release in which you stated: "Patrol Squadron Four salutes the memory of its naval ancestors on this Memorial Day, 30 May 1958."

Chances are exceedingly good that, even if we had received the story in ample time, we would not have considered this item of sufficient general interest to the Navy to warrant inclusion in the final article. Let's put it this way: Would you, as an ALL HANDS *reader, be breathlessly thrilled to read in its pages that Fighter Squadron Umpty-Umpth had saluted its ancestors on Memorial Day? It was our editorial judgment that you would not. We may be mistaken.*

Third, the matter of credits. Contrary to what you may have heard, unless there is a good reason to do otherwise, we do not, as a rule, mention a writer's unit in his credit line. As you know, we did give LTJG Gremp a well-deserved credit line but we didn't mention that he was from Patrol Squadron Four. Our reasons for it are that the chances are good that the writer's unit will have changed by the time the article reaches print.

We'd like to touch on one final point—your problem of letting people know more about Patrol Squadron Four. The answer is simple. Merely send us stories and pictures concerning Patrol Squadron Four and its day-to-day operations or the qualities that make it unique. By the way, what does it do? What may seem routine to you is probably interesting and different from duty in other Navy activities.

One final, final point. We deeply appreciate your original contribution and were particularly happy to receive your follow-up letter. This is the sort of thing that makes our job interesting. We have replied at some length because we want you and other units that have submitted material to know that we do appreciate it, and wanted to explain our reasoning behind the treatment of your article.

Hope to hear from you soon.—ED.

Carrying the Sword

SIR: I recently saw a picture of British naval officers attending a ceremony. It showed them carrying swords instead of having them hooked to their sword belt as we do in the U. S. Navy.

Before World War II, I recall seeing some of our senior officers carrying their swords at ceremonies, but believe the tradition was to distinguish officers who had commanded a capital ship.

I suspect that this is another tradition which has been lost owing to the long period in which the Navy didn't require a sword. Can you enlighten me on this subject?—R.W.P., CDR, USN.

• *Before the 20th century, the method of fastening swords to the sword belt differed from that of today. Instead of being supported from the belt hook with the blade of the sword pointing forward, the sword hung lower and the grip was forward ready for immediate use.*

While this method had obvious advantages if the officer were attacked by an assailant, it was not particularly comfortable. For that reason officers quite often unhooked the sword from the belt and carried it.

Later on this evidently became a privilege that went with rank and probably goes hand-in-hand with the custom you mention. It has evidently fallen into disuse since the reason for it is no longer applicable.—ED.

Extension after 30 Years

SIR: I am a LCDR (1102) who will complete 30 years' service in May 1959. According to Alnav 31, I came within 300 numbers of the selection zone for commander this year which would seem to indicate that I'll be within the zone next year.

Is there a regulation, or policy, which will compel me to retire involuntarily upon completion of 30 years' service, or can I stick around another year to see what happens?—N. H. A., LCDR, USN.

• *Since you will have completed 30 years' service in May 1959 you must revert or retire by 1 Jul 1959.*

Though this is an administrative practice and not a mandatory requirement of law, such extensions are normally not granted.—ED.

Where's the Missileman?

SIR: There's probably a very good reason why Guided Missilemen and Aviation Guided Missilemen are not included in the precedence list contained in Art. C-2102 of the *BuPers Manual*. But I'm curious as to what that reason may be. Are we extinct already?—J. R. K., GF1, USN.

• *Rest assured that the Guided Missileman (GS) and Aviation Guided Missileman (GF) ratings have not been forgotten nor are they obsolete. The*

ratings were established after Art. C-2102 of the "BuPers Manual" was last revised. That is the only reason why they were not included.

A revision of the Manual now in preparation will bring the article up-to-date.

As to seniority, you can place the ratings of AQ, GS, GF and NW between FT and ET, because they will be added to the enlisted precedence list in that order.

Other new ratings and their precedence are: SM, below QM but above GM; BR, immediately following BT; SF, to replace ME; and PT, to take the place of AF.—ED.

Habitability in Ships

SIR: I read with interest the article that appeared in the Today's Navy section on page 40 of the September 1958 issue of ALL HANDS. I am now in command of one of the hardest-working ships of the Fleet. Since I took command, my ship has been underway 61 days and in port 22 days. We are doing an outstanding job of replenishment.

My ship was built during World War II, commissioned in February 1945, and has been in the active Fleet ever since. We have no air conditioning on board, no fancy bunks for the ship's company, and only one locker per man. We do not have "individual dishes, cups, and saucers instead of the customary metal trays and standard hardware."

My officers and men do not complain about these conditions. We have a happy and effective ship. But how do you suppose we feel when we read such an article, knowing full well that this ship has adequate room, power and stability to accommodate all these luxury items, not to mention many others which would improve the military effectiveness of the ship.

I trust some of the boots and fresh-caught SAs will not become so accustomed to the "soft, modernistic color-schemes" which are used throughout the "elaborately decorated barracks," that we who serve at sea will find even greater difficulties in making sailors of those who reach sea duty.—D. E., USN.

• *As you know, the Navy is doing all it can to modernize its ships and stations as rapidly as possible. A glance at our ship's roundup to be found in various issues of this magazine will show that ship after ship is being converted. However, it just isn't possible to accomplish this overnight.*

In the meantime new ships are joining the Fleet and new barracks are being constructed. In these barracks and ships are incorporated new features such as foam rubber mattresses, "soft modernistic color schemes," recreation rooms, and many other habitability features. After all, we do expect new ideas in new equipment.

We don't think the quality of men you get aboard ship are hurt because of these new features. Most men in the Navy today are young, intelligent, and adaptable. They realize that the older type ships are not as plush as some of the newer ones. We don't think anyone expects the features of a barracks to be incorporated in a ship.

Plush conditions don't automatically bring about high morale and hard work; but they sometimes help. It's a 4.0 skipper that can bring about both with an old ship with very few extra habitability features.

We don't think, however, that stories such as the one you mentioned will have an unfortunate effect on the morale of your crew. But they're human; they like their home as pleasant as possible, and most are willing to help improve it. The officers and men of some older ships have achieved remarkle results doing it themselves. All they had were a few dollars from the recreation fund, materials that were already aboard, and the skill and enthusiasm of the crew. If your crew is the type that likes that sort of thing, it can be fun.

Projects in which all hands take a part and share in the results help to strengthen that sense of "belonging."

BuShips has a publication called "Fleet Hab Hints Booklet" (NavShips 250-533-2) which we found very interesting. It lists methods by which crewmen of all type ships can improve the habitability of their ships with the means at their disposal. An article to this effect was published in the July 1956 ALL HANDS. However, since the BuShips publication is kept up to date, it should be more useful.—ED.

SPACEMAN?—Reflection of sun off surface of Salton Sea gives free-falling Navy chutist appearance of being headed toward a nebula in outer space.

NAVY'S ICE MEN—Navymen ready snow train to haul supplies over ice and snow covered wastes of Antarctic while working with Operation Deepfreeze.

One More Postscript on Subject of *USS Shawmut* and *Oglala*

SIR: I found myself very interested in the letters in the past year on ships of the old Navy, particularly on USS *Oglala* and *Shawmut*. Since I served in USS *Shawmut* during a period when history was made, I'd like to tell you a few things I recall about this fine ship.

I joined her when she was in drydock in Philadelphia Navy Yard; and my cousin Charles G. Crenshaw was a machinist's mate first class on her at the time. Later, during World War II, he was a lieutenant commander and chief engineer of USS *Savo Island*. He's now retired.

Anyway, while we were in drydock, in came USS *Olympia*, with a homeward bound pennant that was actually trailing in the water at her stern. How proud we were to see her tied up, and then, in due time to board her and see where Admiral Dewey had stood when he gave his immortal order at Manila!

We then moved down to Hampton Roads and found that we were the flagship of the Atlantic Air Force. Our "force" consisted of USS *Harding* (a four-stacker) and seagoing tug USS *Sandpiper*. I soon made captain's writer, because I could take shorthand and was tolerable on the typewriter. The captain was named Crenshaw, which happened to be the name of my cousin, but that didn't help me any. We learned that we were to go to a point off Cape Henlopen Light and there serve as headquarters for a group of Allied military and naval officers to observe the bombing of captured German ships by aircraft—something that had been unheard of at that time.

We saw *Ostfriesland*, the German battleship; the cruiser *Frankfort;* several destroyers and several submarines sunk by Army bombers (Billy Mitchell was one of the pilots). Some of our Navy planes got into the act, but most of the action was provided by the Army. We had some F5Ls and, as I remember, one or two of them did do some bombing but our other planes, which were NCs, couldn't bomb. You may remember the captain of *Harding* as CDR Albert C. Read, who piloted the NC-4 across the Atlantic. (See book supplement for October 1955 for more on the NC-4.)

You say *Shawmut* was originally named *Massachusetts*. That's not the way I heard it. CAPT Crenshaw told me she was originally *Yale*, or maybe it was *Harvard*, but anyway, she and *Aroostook* were sister ships and named *Yale* and *Harvard*, and were in coastwise service, so the captain said, between Los Angeles and San Francisco.

The rest of your story about her being a minelayer in World War I in the North Sea, having her name changed to *Oglala*, being sunk at Pearl Harbor and all the rest is 100 per cent correct, according to my information.

You might be interested to know that she was named *Oglala* after a town in Nebraska, the name of which is "Ogallala," located on the River Platte, near Kingsley Dam, in Keith County. In 1950, she had a population of 3456 souls. I don't know why the Navy decided to spell the name of the ship different from the name of the town for which it was named. Every time we fellows from "The Mutt," as she was called, would tell what ship we were on, some wise guy would always say: "Oh, yeah. I've seen *Chaumont*, named after some place in France."

Don't misunderstand me. I'm not challenging the correctness of your story, or CDR J.M.R's recollection—all I want to say is that the information I received from CAPT Crenshaw was a bit different.

The photo of *Shawmut* you reproduced fails to include the two large gasoline tanks, painted white, which were located right at her stern for use in refueling seaplanes.

When I was on *Shawmut*, we fellows held our heads pretty high because Tom Maxted, heavyweight champion boxer of the Navy, was a member of our crew. We were sure proud of him. Some of us found out the hard way that real good fighters don't do much talking about how tough they are. I guess they don't have to, and know it.

I was a captain in World War II, Transportation Corps, AUS, serving in North Africa, Italy, England, France and Belgium. I was in Military Railway Service as adjutant of 719th Railway Operating Battalion. I was retired as a major, but still like to read about the Navy.—Major Milton C. Jones, AUS, (Ret.).

• *Thanks for the added info on* Shawmut. *We're certainly glad you didn't take us seriously when we suggested no more questions concerning* Shawmut. *Any time any one has more to tell us, just fire away.*—ED.

Hotter Than Hyades?

SIR: Just by chance I happened to run across the August 1958 issue of ALL HANDS (haven't seen one since 1951) and naturally as an ex-white hat, I immediately became engrossed in it.

But, when I turned to page 28, I had to re-read the article, "Who's as Hot as *Hyades?*" Not being one to jump to conclusions, I suggest: "Let's look at the record."

The writer may be right in his calculations and claims, but he is wrong if he thinks that 40 tons per hour set a record.

In 1951, I was attached to Cargo Handling Battalion One, and in April of 1951 CHB One was aboard *Hyades* to provision the Fleet in the Med. We transferred over 60 tons an hour, and if my memory serves me right, we discharged 500 tons in one day by hi-line. One of the ships we replenished was USS *Franklin D. Roosevelt* (now (CVA 42), and many others I can't remember.

I compliment *Hyades'* letter writer for the pride he exhibits in defending his ship, but I don't think he can beat the record set by CHB One.—Leonard Spiva, ex-USN.

• *Before rebutting* Hyades, *let's re-read that article. We refer you to the second message quoted, from* USS Salem *(CA 139); "YOUR DELIVERY TODAY OF 280 LONG TONS IN 2 HOURS 50 MINUTES FIRST TO LAST LOAD BEST PERFORMANCE WE HAVE SEEN X . . ." Now, let's clarify one other point, a ton is not always 2000 pounds. A long ton, as used in this message and commonly used in Great Britain, is 2240 pounds. A short ton, on the other hand, normally used in the United States and Canada, is 2000 pounds.*

Now, let's compare 280 long tons in two hours and 50 minutes, to your record of 60 tons (presumably) short ones in one hour. If you break down Hyades' *mark to short tons, as normally used in the U.S., you can tack on some 33 additional tons. There goes your record, and probably a few more besides.*

They moved a lot of cargo in less than three hours, and don't forget although they had steam winches, they had no conveyors. CHB One handled a lot of cargo too, but let's not knock Hyades *until we have something to knock with.*

If you get the chance, look over the November 1958 issue of ALL HANDS. *On page 28,* USS Graffias *(AF 29) also presents some impressive figures.*—ED.

Fleet Training Group Locations

SIR: The October 1958 issue of ALL HANDS, with its emphasis on Fleet training facilities and educational opportunities, is very fine. However, on page three there is an inaccuracy regarding the Fleet Training Groups, Pacific, which are under the command of COMTRAPAC. Fleet Training Group, San Diego, was omitted. There is no Fleet Training Group, Sasebo, Japan, as services in that area are arranged through Fleet Training Group, Western Pacific, located at Yokosuka, Japan.—W. S. Finn, CAPT, USN, Training Officer, FLETRAGRU, San Diego.

• *OOOOOOPs! You're so right, Captain. After mentioning that* COMTRAPAC's *headquarters are in San Diego, we simply overlooked the fact that* FLETRAGRU *was also there. And so far as Sasebo goes, you are correct too.*—ED.

Gold Hashmarks and Wings

SIR: I was in the Marine Corps from 1943 to 1946, joined the Army and served from 1946 to 1947, did a hitch in the Air Force from 1947 to 1950 and enlisted in the Navy in 1951. Since all of these years counted as good conduct time, I'm wondering if I rate wearing the gold rating badge and gold hashmarks.

There's another question that's been on my mind. While in the Air Force, I was graduated from pilot's school. Can I wear my Air Force pilot wings on my Navy uniform?—J. F. C., AC1, USN.

• *Your time in the other services count for red service stripes but not for gold. You can find this answer in Art. 1202.6(d) of "U. S. Navy Uniform Regulations."*

In reference to your query concerning Air Force pilot wings on your Navy uniform, again we refer to Uniform Regs—this time Art. 1203.2(b). This has to do with wearing breast insignia and states: "Similar qualification insignia of other services or nations shall not *be worn on the naval uniform.*—ED.

It's Hard Not to Be 4.0

SIR: I don't savvy the scoring system for the big 80-question test in your October issue. I added up my 56 correct answers, multiplied by .1 as prescribed on page 18 and got 5.6, which is more than a 4.0.

And I am ashamed of myself for missing some that I did. I think you meant to multiply by .05, didn't you? That would have given me the 2.8 I deserved.—Phil Russell, JOC, USN.

• *You deserve a good score for catching the blooper.*—ED.

Torpedoman Rating

SIR: I have read the article "Striking for the Hard Hat" which appeared in your September issue, but I was surprised not to see TMC listed as a stagnant rating.

What are the current TMC requirements, and what is the advancement picture for the next few years?

—J.W.A., TM1(SS), USN.

• *The on-board strength of TMCs at the present time is 97 per cent of requirements. While the TM rating is not stagnant compared to such others, as SD, AD, YN and PN, it is not a critical one either, as are RM, NW and the like.*

Advancements to TMC have been small, but during the past few months there has been a great increase in the number of requests for transfer to the Fleet Reserve. The future looks good for you and other TMIs.—ED.

Ship Reunions

News of reunions of ships and organizations will be carried in this column from time to time. In planning a reunion, best results will be obtained by notifying the Editor, ALL HANDS Magazine, Room 1809, Bureau of Naval Personnel, Navy Department, Washington 25, D. C., four months in advance.

• USS *Idaho* (BB 42)—The second annual reunion will be held at the Nansemond Hotel, Ocean View, Norfolk, Va., on 19, 20 and 21 June. For additional information, write to USS *Idaho* Association, P.O. Box 8048, Norfolk 3, Va.

• USS *South Dakota Veterans' Association of WW I*—The 38th annual reunion of the World War I crew will be held on 4 April in Aberdeen, Washington. Further information may be obtained from Carl Haggland, 2519 N.E. 59th Ave., Portland 13, Ore.

• USS *Ammen* (DD 527)—All who served on board during World War II and who are interested in holding a reunion with time and place to be decided by mutual consent may write to Herbert Legg, P.O. Box 212, Olympia, Wash.

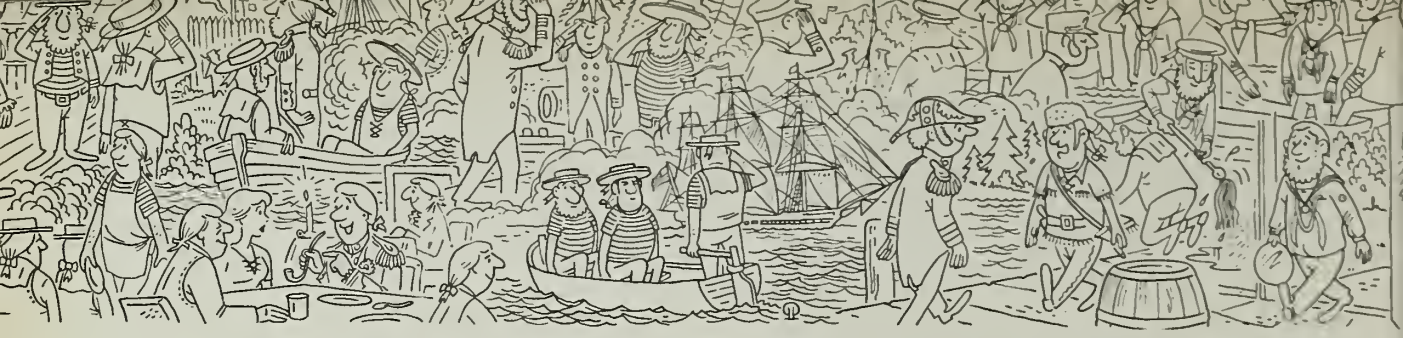
• USS *Haverfield* (DER 393)—All plankowners who are interested in holding a reunion may write to Robert "Otto" Ahlander, 4705 West Palmer, Chicago 39, Ill.

• USS *Hemminger* (DE 746)—All former crew members who are interested in holding a reunion with time and place to be decided are invited to write to Richard E. Buffington, 1765 Townsend Ave., Bronx 53, N. Y.

• USS *Rankin* (AKA 103)—All who served on board from 1952 to 1954 and who are interested in holding a reunion with time and place to be decided may write to Frank Bera, 900 Dobbs Ferry Rd., White Plains, N. Y.

• *YMS* 25—All who served on board from 1941 to 1945 who are interested in holding a reunion with time and place to be designated by mutual consent may write to Warren H. Acker, East Harvard St., Lewistown, Pa.

• FASRON 103—All who served in this squadron who are interested in holding a reunion with time and place to be decided may write to S. E. Uccello, Graham Rd., Wapping, Conn.



NAVAL COURTESY:

FOR YEARS one of the subjects in the Navy that has always been good for a fantail session—along with pay and liberty—has been the matter of military courtesy. For example, how many different salutes can you name—and how many can you execute? What is the procedure in boats during colors?

Knowledge of military courtesy is important to every Navyman because he's practicing it all the time—whether he realizes it or not. And knowing what to do—at the right time—can keep him out of some embarrassing situations. In the pinch, this is what distinguishes the real salt from the no-hashmark sailor.

But there are a lot of fine points about military courtesy that perplex even the seasoned Navyman. We'll try to cover as many as possible.

This is partly because many of the practices are not to be found in any publication, official or unofficial; partly, because the Navy is in a continual state of change and, as the Navy changes, so must its customs.

In many cases, customs have simply evolved out of necessity, thus becoming a part of the Navy's "unwritten" traditions. Some practices represent opinions of Department of the Navy senior officials or Old Chief; some are merely an

• Saluting

Whom should you salute?

All enlisted naval personnel are required to salute officers (including warrant officers) of the Navy, Army, Air Force, Marine Corps, Coast Guard and foreign military and naval officers whose governments are formally recognized by the U. S. Government. Reserve officers of the armed services and the National Guard are rendered a salute when they are in uniform. Public Health and Coast and Geodetic Survey officers, when serving with the armed forces of the U. S., rate a salute.

Salutes are rendered by officers to seniors in their own service and other services as outlined above.

What about salutes to midshipmen?

Midshipmen and cadets in the armed services rate a salute from enlisted personel.

•Salutes on Board Ship

When are salutes rendered in ships?

All senior officers (senior to the person saluting—for instance, a lieutenant would be a senior officer to both an ensign and a seaman recruit) attached to your own ship or station are rendered a salute on the first daily meeting. After that, it usually isn't necessary. There are, however, exceptions to this rule:

". . . salute when you meet . . ."

". . . salute captain at every meeting . . ."

(1) Inspecting officers are rendered salutes during the course of their inspections.

(2) When you are addressed by or addressing a senior officer, salutes are exchanged. Persons at work or engaged in games, however, salute senior officers only when addressed by them, and then only if circumstances warrant.

(3) All officers and enlisted men salute all flag officers, commanding officers of ships and officers senior to themselves from other ships on *each* occasion of meeting, passing near or being addressed.

• Salutes in Boats

What salutes are rendered when boats are passing one another?

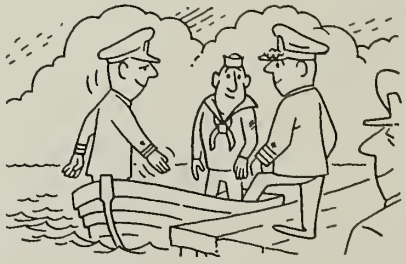
In boats passing one another with officers or officials on board and in view, the senior officer and the coxswain of each boat render salutes. Officers do not rise when rendering this salute. Coxswains rise and salute unless it is dangerous and impracticable to do so.

What is the procedure for salutes when boats are lying at landings, accommodation ladders or boat booms?

Men seated in boats in which there is no officer, petty officer or acting petty officer in charge rise and salute all officers passing near. When an officer, PO or acting PO is in charge of a boat, he alone renders the salute.

What is the proper procedure for officers and coxswains when a senior officer or an officer enters or leaves a boat?

Officers seated in boats rise in rendering and returning salutes when a senior enters or leaves the



". . . seating procedure in boats . . ."

A SHORT COURSE

adaption of a similar practice followed in polite society. Some have been formalized through publication in *Navy Regs*, the *Landing Party Manual*, the *Bluejacket's Manual* or "The Flag Code" (Public Law 829). Some have been widely adopted only after extensive discussions in the columns of ALL HANDS. (Passing honors to *Arizona*, for example.)

The Navyman who knows his naval courtesy not only makes a good appearance but he also has a feeling of self-assurance that will carry him through difficult situations that may range from daily practice to events of national importance.

Your knowledge of naval courtesy can do a lot for you. In addition to building up your self-confidence, it marks you as a person with self-respect plus the respect of the people about you.

Naval courtesy encompasses rules of etiquette, matters of custom, and compulsory procedures during honors. In naval courtesy, there is no implication of servility or humbleness.

In the following pages, ALL HANDS presents a summary of the rules of naval courtesy that are generally accepted as proper in the Navy of today. We hope it will be of help to you.

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boat. Coxswains in charge of boats rise (unless by so doing, the safety of the boat is imperiled) and salute when officers enter or leave their boats.

• Passing Honors

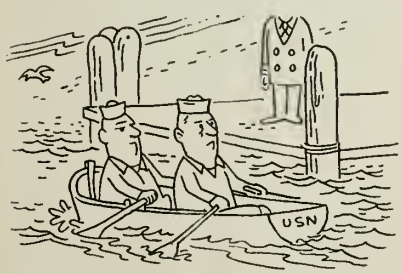
Rendering the hand salute is a part of "passing honors." These honors are rendered by ships or boats passing "close aboard"—within 600 yards for ships and 400 yards for boats.

On what occasions and by whom are these hand salutes made, when rendering passing honors?

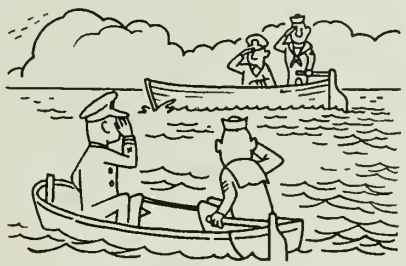
Hand salutes are rendered by all persons in view on deck and *not in ranks*, when passing honors are exchanged between ships of the Navy or between Navy and Coast Guard ships.

Hand salutes are rendered by ALL persons in view on deck, *whether in ranks or not*, when:

(1) Passing honors are rendered by a ship of the Navy being passed close aboard by a boat displaying the flag or pennant of high-ranking civil officials, other civil officials entitled to honors on official visits, and officers of an armed service.



". . . no salute expected while on the oars . . ."



". . . officers and coxswains salute—officers do not rise—coxswains do, if safety permits . . ."

(2) Passing honors are rendered by a ship of the Navy being passed close aboard by a ship or boat displaying the flag or standard of a foreign head of state, sovereign or member of a reigning royal family.

(3) Passing honors are exchanged with foreign warships (and, when appropriate, with foreign shore stations).

In all cases the signal for the salute will be "Attention" sounded by the bugle or hand whistle.

• Military Funerals and Religious Ceremonies

What are the rules on conduct by service personnel at military funerals and how do they differ from funerals not under military auspices?

In general, a military man uncovers during a religious ceremony but remains covered during a military ceremony. Military funerals and burials at sea are regarded primarily as military ceremonies. On the other hand, church services, civilian funerals or burial services which the Navyman attends as a friend or relative rather than as representative of the Navy, are religious ceremonies.

At a military ceremony when the occasion requires, an officer or enlisted man salutes rather than uncovers. This is his traditional mark of respect.

Navymen, during a funeral, remain covered while in the open and uncover upon entering the church. During burial at sea, they remain covered throughout the service.

If military personnel were attending a funeral, officially, when would they salute?

Military personnel would salute whenever honors are rendered.

". . . men salute if no officer or PO in charge . . ."

When are these honors rendered?

They are rendered when the body is removed from the hearse to the chapel, from the chapel to the caisson, and from the caisson to the grave. Honors are also rendered

". . . in Navy building, covered junior salutes uncovered senior . . ."

when the volleys are fired and when "Taps" is sounded.

Does a military person who attends a non-military funeral or burial service follow the same saluting procedure?

He may if he so chooses. However, when attending a non-military service, he may, if he desires, follow the civilian custom and uncover (rather than salute) when such honors are required. Such times would be during the procession to the grave, lowering the body, etc.

How do these rules apply in the case of Jewish religious ceremonies?

Jewish custom dictates that observers and participants remain covered during all religious ceremonies. Therefore, the rules regarding removal of headgear do not apply when a representative of the Jewish faith conducts the service.

What is the procedure for remaining covered or uncovered during formal religious ceremonies outdoors or during topside shipboard religious services?

Officers and enlisted personnel re-

". . . salute officers you recognize . . ."

main uncovered throughout the length of religious ceremonies conducted topside on board ship and during formal religious ceremonies outdoors. An Easter sunrise service would be an example of the latter.

• Salutes in Buildings

Are salutes exchanged in buildings ashore?

It depends upon the building. In a Navy building when two officers or an enlisted person and an officer meet, salutes are exchanged, providing they are covered.

In a public building such as a theater or bank, salutes are not exchanged if it does not appear appropriate to do so under the circumstances.

When a covered junior meets an uncovered senior in a Navy building, the junior should salute. The senior, being uncovered, does not return it, but acknowledges the salute by a nod or greeting.

If both junior and senior are uncovered, the presence of one another is acknowledged by nods or greetings. The junior customarily makes the first gesture.

• Salutes by Women

Are there special regulations gov-

". . . women in civvies, hats or not, hand over heart . . ."

erning salutes by women in uniform which differ from those for men in uniform?

The same general regulations apply as those in effect for men. However, in places where men are customarily uncovered — in the theater or in church—for instance, women do not salute, even though they may be covered. Reason for this is that they are following civilian, rather than military custom, in wearing their hats in such places.

Is it proper to salute the President of the U. S.?

Yes, the President, as commander-in-chief, is entitled to a hand salute from all military personnel.

• Salutes in Civilian Clothes

Seniors in civilian dress when recognized by a junior should be saluted when a salute would otherwise be in order. If covered, the senior returns the salute and if uncovered he will not return the salute unless failure to return the salute would cause embarrassment to all concerned. It is the senior's prerogative to decide whether or not he should salute.

What is the prescribed manner of saluting by a junior in civilian dress and covered?

The junior in civilian clothes and

". . . even when in civvies and covered, salute seniors . . ."

covered salutes seniors both in civilian dress and in uniform.

If you are not in uniform when greeting civilians, comply with rules and customs established for civilians.

• Saluting when Uncovered

When is it proper to salute when uncovered?

A hand salute by a person uncovered was prohibited under the old rules in *Navy Regs.* Article 2110, par. 3, now states that Navymen, when uncovered, will not salute, except when failure to do so would cause embarrassment or misunderstanding.

• Group Saluting

When several officers in company are saluted, do they all return the salute?

Yes.

What are the rules on saluting in ships in gatherings or congested areas?

Salutes are rendered at crowded

". . . no salute—in crowded gatherings . . ."

gatherings or in congested areas only when being addressed by or addressing a senior officer. This rule is not intended to conflict with the spirit of saluting regulations, and salutes should always be rendered

when one is in doubt as to whether or not to salute.

Suppose an enlisted man was walking with a lieutenant and they meet an ensign. What is the prescribed form in this case?

The ensign salutes first and the enlisted man renders the salute at

". . . salutes to personnel in passing vehicles . . ."

the same time as the lieutenant returns the salute.

What is the proper form for saluting if enlisted men and officers are standing together and a senior officer approaches?

In such a case, the first officer or EM to notice the senior officer's approach says, "Attention!" All present then face the officer and salute.

• When Seated

Enlisted personnel seated and without particular occupation rise upon the approach of an officer, face toward him and salute when covered. If both remain in the same general vicinity, the compliments need not be repeated. These rules do not apply when seated in a boat.

What if a group of enlisted men is seated at the mess table for meals or taking examinations?

At mess or engaged in a particular

". . . at mess, sit at attention when addressed . . ."

occupation, they sit at attention if addressed by an officer.

• Upon Reporting

When reporting on deck or out-of-doors, ashore, salutes are rendered if covered. When reporting to an officer in an office, uncover before entering, approach the senior and stand at attention.

• Vehicles

Enlisted personnel and officers salute all seniors riding past in vehicles. Naval personnel, while passengers in a vehicle, both render and return salutes as may be required.

Do these same rules apply to the driver of the vehicle?

If the vehicle is stopped, the driver salutes. If the vehicle is moving, he doesn't if by so saluting, the safety of the occupants of the vehicle would be endangered.

• Ladies

What are the rules on saluting for service personnel when escorting ladies?

Navymen escorting ladies, or meeting officers and EMs escorting ladies, exchange the customary salutes. Juniors who may be seated with ladies rise and salute.

". . . proper greeting to ladies is a salute . . ."

When a Navyman meets a lady acquaintance walking down the street does he salute the lady?

It is a customary form of greeting—and gesture of departure—for a Navyman to salute a lady acquaintance when meeting on the street.

• Returning Salutes

Must a salute be returned?

Under normal conditions every salute is returned. In cases where it is impracticable for the senior to return the salute, the junior's salute is customarily acknowledged by a nod or greeting.

What are some instances in which it would be impracticable for the senior to return the salute?

It would be impracticable for the senior to return the salute when he is driving a vehicle, when both arms or hands are used for carrying packages or brief cases or any other instance where both are engaged.

• Left Hand Salutes

Is it ever proper to salute with the left hand?

Yes. An instance of a left-hand salute is during "side honors" when the boatswain's mate uses the boatswain's pipe. A hand salute is rendered at the same time the side is piped. Since few are skilled in using the pipe with the left hand, the pipe

". . . salute may be too awkward . . ."

is held in the right hand and the salute is given with the left.

Overtaking

Suppose it is necessary for a junior to overtake a senior when both are walking in the same direction. What is the proper form?

No junior should overtake and pass a senior without permission. When in a hurry and it is necessary to pass a senior, the junior salutes when abreast and asks, "By your leave, sir?"

This differs from the customary exchange of hand salutes in that the salute is not rendered at six paces, but abreast.

Seniority Unknown

Take the case of two officers of the same rank who do not know their relative seniority. How are salutes exchanged in this case?

Officers of the same rank obviously cannot go around asking one another their date of rank before saluting. In such cases both officers salute mutually and without delay.

". . . overtake on the left . . ."

• Special or Unusual Cases

There are numerous cases in which there is some doubt as to whether a salute should be rendered. What are the regulations on some of these special cases where salutes would not be rendered?

Reserve officers not an active duty

and in uniform are not entitled to a salute.

Officers of the maritime service are not officially entitled to a salute. However, under proper circumstances and as a matter of courtesy they are saluted.

If a woman of the military serv-

". . . at sling arms—steady rifle and hand salute . . ."

ices is in church and the national anthem is played, she does not salute. The hat in such a case is not being worn as a badge of office. It is being worn in conformance with civilian rather than military custom.

A rumor has long been in circulation to the effect that the holder of the Medal of Honor is entitled to a salute because of that award. There is no truth to the rumor.

A member of a guard detail does not salute when performing any duty which prevents saluting.

Give some instances of special cases where saluting is required.

When an officer awards an enlisted man a decoration or citation, it is customary for the EM to step back after receiving the award and to salute the officer. The officer then returns the salute.

Enlisted personnel, when ad-

". . . aboard ship, sentries at gangways salute all officers—even those passing close aboard . . ."

dressed by an officer, salute both at the beginning and ending of the conversation. If in formation, the salute is rendered only upon command.

Gangway sentries salute all officers going over the side or coming on board, and when passing or being passed by officers close aboard, either in boats or while walking, or riding in a vehicle.

Men in ranks salute only by command.

What are the different kinds of salutes?

There are several types of salutes rendered by individuals, including: hand; rifle at order or trail arms; at right shoulder arms; at present arms; sword, and "eyes right." "Eyes right" is a form of salute for men in ranks. It is executed only upon command. Ships "salute" each other in passing honors, etc.

Under what conditions other than those described above, is the salute given?

Salutes are rendered the national anthem and the national ensign.

• Playing of National Anthem

When the national anthem is played, what salute is required?

Military personnel not in forma-

". . . face the flag or music . . ."

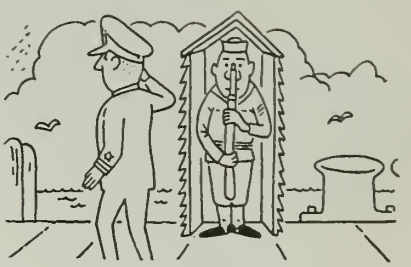
tion face the music and render the hand salute. In formation, the officer-in-charge orders "attention" and he renders the appropriate hand or sword salute for the formation. When marching in the immediate vicinity of the ceremony, the formation is brought to a halt and the officer-in-charge renders the appropriate salute. Men in civilian dress stand, remove headdress, if covered, and salute by placing the hat in front of the left shoulder with the hand over the heart; women, with or without headdress, stand and place the right hand over the heart. Aliens stand at attention.

If the flag is displayed, the saluting formality is the same as above except all persons face toward the flag instead of the music.

What is the procedure for persons in a boat during the playing of the national anthem?

In boats, only the boat officer—or in his absence, the coxswain—stands and salutes upon the playing of the national anthem. Other members of the crew and passengers who are already standing, stand at attention. All others remain seated.

Personnel standing at attention in a boat during the playing of the national anthem do not render the "hand-over-heart" salute, even



". . . present arms when halted on patrol . . ."

though dressed in civilian clothing. This is an exception to the general rule.

How long should a salute to the national anthem be held?

In all cases when the national anthem is played, salutes will be held from the first note of music until the last note.

What are the prescribed forms for salutes if the national anthem is played during a ceremony inside a building in which the national flag is brought forward and presented to the audience, and then retired?

The audience, civilian and uncovered military personnel, will stand, face the flag, and render the "right hand over the heart" salute from the first note to the last.

Military personnel, with rifle, present arms. Those with sidearms or covered, render the hand salute. Should a military formation be pres-

". . . uncovered and in civvies, place hand over heart . . ."

ent, the officers in charge will render the salute. If the audience is all or predominantly military personnel, the OIC will call "attention" and he may order all personnel (covered and/or uncovered) to render the hand salute or he may salute for the

audience. Salutes are held until the flag ceremony is completed.

What are proper forms for salutes when the national anthem is played during a ceremony inside a building and the flag is NOT displayed?

All persons stand and face the music. Military personnel under

". . . face the flag when displayed during anthem . . ."

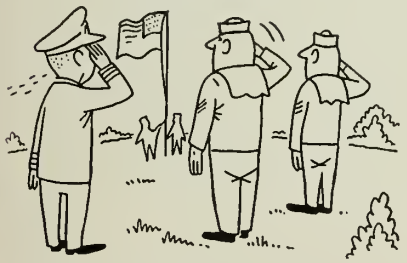
cover render the hand salute. When uncovered, military personnel stand at attention and face the music. All persons stand at attention and hold the position of salute from the first note to the last.

When the national anthem of a foreign country is being played, what marks of respect are shown?

The same marks of respect prescribed for observance during the playing of the "Star Spangled Banner" are shown toward the national anthem of any other country formally recognized by the government of the U. S.

Do the above rules concerning salutes to the national anthem apply every time one hears it played, even when a person is in the privacy of his home, or when he hears it being broadcast while out of doors?

Only during a formal rendition of the "Star Spangled Banner" do the rules given above apply.



". . . all salute when not in formation . . ."

If you were to walk past a music store and heard a phonograph record of the national anthem being played, you would not come to a halt and salute nor would you do so in your own home.

However, at public gatherings where the anthem is being broadcast as part of the ceremony, you would render the required honors.

Is there a prescribed number of stanzas of the national anthem to be played at formal ceremonies?

When a band of the armed services plays the national anthem, it is played in its entirety. Incidentally, a band never plays the national anthem while marching.

• Salutes to the National Ensign

Perhaps the greatest number of salutes to the ensign are rendered during colors. This is the ceremonial hoisting and lowering of the ensign at 0800 and sunset at a naval command ashore or on board a ship of the Navy not underway. At naval stations or on board ships where a band is present, the national anthem is played during this ceremony. Consequently, the rules for salutes during the playing of the national anthem apply.

". . . take off hat—place hand and hat over heart . . ."

Is there any musical ceremony other than the playing of the national anthem during salutes to the national ensign?

At most ships and stations, when there is no band present. "To the Colors" is normally played by the bugle at morning colors. At evening colors "Retreat" is played by the bugle. As an alternative on these occasions, "Attention" is sounded on the hand whistle.

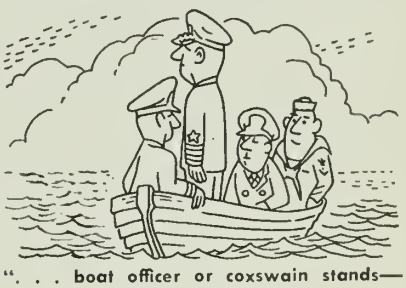
What is the procedure for salutes at colors when no band is present?

Stand at attention and face the ensign. When covered come to the salute at the first note of "Attention" on the bugle or the hand whistle (a single blast) and remain at the salute until "Carry On" (three blasts) is sounded on the bugle or hand whistle. Persons in ranks come to the salute together, by command.

What is the procedure for persons in boats during colors?

During colors, a boat underway within sight or hearing of the ceremony either lies to or proceeds at the slowest safe speed. The boat officer—or in his absence, the coxswain—stands and salutes, except when dangerous to do so. Other persons in the boat remain seated or standing and do not salute.

What are the rules for saluting the national ensign when it is being



". . . boat officer or coxswain stands—except when . . ."

hoisted and lowered, or passing in parade?

During the ceremony of hoisting or lowering the ensign or when the ensign is passing in a parade or in a review, Navymen out of doors should face the ensign, stand at attention and salute in the appropriate manner (see below). The salute is rendered during the entire period of hoisting or lowering, and in a parade the salute to the flag is rendered at the moment of passing.

What are the regulations for members of the armed services (men and women) when in uniform and the national flag is hoisted, lowered or passing in parade?

Personnel in uniform rise and come to attention if seated, halt and come to attention if walking, face the flag and render the military hand salute.

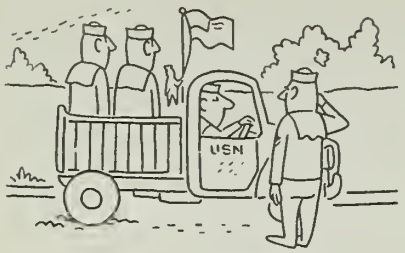
Personnel under arms, not in for-

". . . man in charge of formation may salute for all . . ."

mation, and with a rifle, present arms; with sidearms, they give the hand salute.

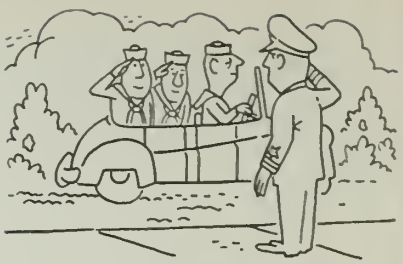
In marching formations, the troops are brought to a halt, brought to present arms, and the officer-in-charge salutes.

What is the proper salute to the



". . . salutes by personnel in open military vehicles . . ."

". . . driver gets out and salutes—passengers sit at attention . . ."



". . . only passengers in passing car salute . . ."

flag passing in parade, hoisting or lowering by persons in civilian dress, with and without headdress?

Navymen in civilian dress with headdress, rise and remove hat with right hand, place the hat in front of the left shoulder with the hand over the heart. Men without headdress, and women in civilian dress, with or without headdress, place the right hand over the heart.

What is the procedure for persons in vehicles during colors?

Vehicles within sight or hearing of the ceremony of colors are stopped. Persons riding in a passenger car or on a motorcycle remain seated at attention. Occupants of other types of military vehicles remain seated at attention in the vehicle. The person in charge of such vehicle (other than the driver) gets out of the vehicle and renders the hand salute.

What symbol of respect to the national ensign is shown on board ship?

A salute to the national ensign is rendered by persons in the naval service coming on board or leaving a ship of the Navy. This salute is customarily rendered only if the ensign is flying.

What is the proper procedure for rendering this salute on boarding or leaving a ship?

On reaching the upper platform of the accommodation ladder or the shipboard end of the brow or gangplank, you stop, face the ensign and render the salute. Following this, the officer of the deck is saluted. On leaving the ship, these salutes are rendered in reverse order. The OOD returns both salutes in each case. Follow the same procedure on board foreign men-of-war.

Does an enlisted man acting as officer of the deck or junior officer of the deck rate this salute?

When an enlisted man is officer of the deck or a representative of the OOD he is entitled to receive and required to return salutes the same as a commissioned officer.

During a ceremony INSIDE A BUILDING when the flag is brought forward and presented to, and at the time it is retired from the audience, in what manner do civilians and uncovered military personnel render the salute to the flag?

All persons stand at attention, facing toward the place where the colors will be stationed during the ceremony. All uncovered military persons and civilians stand and place the right hand over the heart and hold that position until the color bearers have placed the flag, stepped away and rendered the hand salute, and similarly when retiring the flag.

When displayed either horizontally or vertically against a bulkhead or elsewhere, how is the flag positioned with respect to the blue field?

The blue field is uppermost and to the flag's own right, that is, to the observer's left. The reason for this is heraldic in origin. According to the rules of heraldry, the blue field is the honor point and should, therefore, occupy the position of danger. The position of danger is the position of the arm which holds the sword, that is, the right arm. Hence, the blue field of the flag which faces the observer, should be to its right. A simple rule-of-thumb to go by is this: We always speak of the flag as the Stars and Stripes, never the stripes and stars. Therefore, when we look at the flag, it should read "stars—(in the blue field) and "stripes."

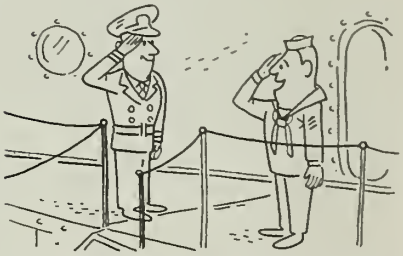
• Shipboard Practices

If in the course of his watch an EM has occasion to enter officer or CPO country does he uncover (take off his hat)?

Generally speaking, yes. If he is in a duty status (on watch, he would be in a duty status) and wearing sidearms or the pistol belt, he removes his hat when entering a space where a meal is in progress or divine services are being conducted. This holds true for officers and enlisted men alike.

In the cases of spaces where a meal is not in progress or divine services are not being conducted, the officer or enlisted man in a duty status and wearing sidearms or the pistol belt remains covered.

Officers' cooks or stewards usually



". . . salute colors, then OOD when boarding ship—salute OOD, then colors when leaving ship . . ."

remain covered while in officer country while on duty.

Would an officer upon entering the crew's messing compartment while the crew is at mess uncover even though he is on duty and wearing sidearms?

Yes.

If a man in a duty status has occasion to see an officer in the wardroom (when a meal is not in progress) or in the officer's stateroom, does he remain covered?

Yes, if he wears the duty belt or sidearms. He not only remains covered, but he also renders the salute upon first addressing—or being addressed by—the officer. The

". . . seniors are accorded more desirable seats . . ."

". . . closed vehicles halt during colors—occupants sit at attention . . ."

fact that the officer may not be wearing a cap does not alter the saluting requirement. If the officer is covered he returns the salute; if not covered, he, of course, does not return it. Instead, he acknowledges the salute with a nod or greeting.

• Relations of Seniors and Juniors

What do Navy Regs and naval traditions say about the relations of seniors and juniors?

Navy Regulations (1948) states that: "Juniors shall show deference to seniors at all times by recognizing their presence and by employing a courteous and respectful bearing and mode of speech toward them."

Precedence and deference to

". . . clearing passage for seniors . . ."

seniors are the keystones of military courtesy. Officers take precedence according to rank. This precedence is not confined to strictly military relations on ship or shore, but it extends to the mess, to the club and to their social life. It corresponds to those tokens of deference and respect that younger men would accord to their elders under the usages of polite society.

Courtesy also prescribes that seniors acknowledge and respond to tokens of respect required of juniors, so there is nothing servile in the exchange, but rather a sort of ritual for observance by those serving their country in a strictly ordered fraternity of military service.

What is the correct attitude for a junior when approaching a senior for the purpose of making an official report or request?

Whether the junior is an officer or enlisted man, he maintains an attitude of military attention. He does not take a seat or smoke until invited to do so. According to one authority, "Any relaxation of formality and official relations should be 'awaited' rather than 'anticipated' by juniors." Under some circumstances it might be permissible for the junior to ask, "Do you mind if I smoke, sir?"

What is the proper procedure when a senior enters a classroom in which junior officers or enlisted men are seated?

When a senior enters a classroom in which junior officers or enlisted men are seated, the first one who sees the senior orders "attention." All present remain at attention until the order to "carry on" is given by the senior officer of the group present. In most cases, the senior entering the room will give the order "as you were" immediately or soon after "attention" is ordered.

Should a junior, who is seated, rise when addressed by a senior?

Yes. He should rise and remain at attention. Men seated at work, at games or mess are not required to rise when an officer (other than a flag officer or commanding officer of the ship or station) passes unless they are called to attention or when necessary to clear a gangway.

When a junior walks, rides or sits with a senior, what position does he take?

As the place of honor is on the right, a junior who is walking, riding or sitting with a senior takes the position *alongside and to the left*. When pacing to and fro, positions are not exchanged and the junior keeps pace with the senior. On board ship, the senior is generally afforded the outboard position. The junior opens doors and enters last.

• Orders and Commands

What is the correct reply to an order?

"Aye, aye, sir" is the only proper reply to an order. Responses such as "all right, sir," "yes, sir," "very well, sir" and "O.K., sir" are improper.

What is the meaning of "aye, aye, sir"?

It means three things: that you *heard* the order, you *understand* the order and you will *carry out* the order to the best of your ability.

In what way may seniors acknowledge a report made by a junior?

Seniors respond with "very well." Traditionally, the junior never says "very well" to the senior.

What is the difference between an order and a command?

An order gives a junior a job to be done and leaves it up to him as to how he may accomplish it. Though an order does not always specify the exact time when it shall be executed or completed, it frequently fixes a certain time limit.

A command directs a specific action, without alternatives.

If you are the navigator's yeoman and the navigator has told you to have a certain report prepared by the end of the week, you have been given an order. On the other hand, if the navigator tells you to bring him the navigator's work book you have been given a command.

If a senior expresses a wish or a desire is that the same as an order?

Yes. Custom, tradition and commonsense suggests the advisability of regarding it as such.

• Phrasing

In verbal messages or conversation

". . . maintain silence in running boats when . . ."

". . . during colors only coxswain salutes . . ."

". . . PO in charge obtains permission for visiting boat party . . ."

". . . saluting etiquette in boats . . ."

between juniors and seniors, is there any difference in phrasing?

Yes. A junior officer sends his respects to a senior. For instance, "Lieutenant Alfa sends his respects to Captain Bravo and would like permission to test the whistle and siren."

A senior officer sends his compliments to a junior. For instance, "Admiral Foxtrot presents his compliments to Captain Golf and sends word that the ship's clocks will be advanced one hour at midnight."

In written correspondence, the senior officer may *call attention* to something; the junior may only *invite attention* to something.

How does a junior conclude a memorandum to a senior?

"Very respectfully."

A senior writing to a junior may, but is not required to, close his correspondence, "Respectfully."

Do you shake hands on being introduced to or on meeting a senior officer?

A junior always waits for the senior to initiate the gesture of shaking hands. It is considered good form for senior officers to offer the hand to junior officers and enlisted personnel upon being introduced socially.

• Quarterdeck Etiquette

The quarterdeck has long been an honored and ceremonial part of the ship. Naval etiquette and courtesy, honors and ceremonies play an important role in the quarterdeck area.

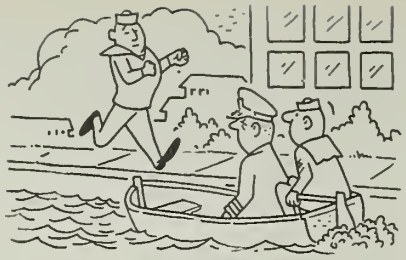
The officer of the deck must strictly enforce the etiquette of the quarterdeck. The quarterdeck should be kept immaculately clean and its ceremonial aspect maintained. Adherence by all personnel to long-established rules is required.

What rules should naval personnel observe in the quarterdeck area?

Naval personnel should:

(1) Wear only the uniform of the day while on the quarterdeck.

(2) Never smoke on the quarterdeck.



". . . get there early . . ."

(3) Avoid a lounging position while on watch or standing by and avoid putting hands in pockets on the quarterdeck.

(4) Avoid skylarking.

(5) Do not engage in recreational athletics on the quarterdeck unless it is sanctioned by the captain.

When coming aboard or leaving a ship other than his own what procedure does a Navyman follow?

The procedure is the same as in his own ship with the added requirement that he must request permission to come aboard. He stands at the gangway and renders a salute to the ensign if it is flying, then salutes the OOD or the OOD's representative and says, "I request permission to come aboard," or words to that effect.

On leaving a ship as a visitor, he goes through the same steps except that he says, "With your permission, I shall leave the ship" or words to the same effect.

What language does a Navyman use when boarding or leaving his own ship? Does he request permission to come aboard?

No. He should follow the rules of the ship. If he is returning from leave or liberty he says, "I report my return aboard."

On leaving his ship, he salutes first the OOD or his representative saying, "I have permission to leave the ship, sir" or "Permission to leave the ship, sir?" Then he renders the salute to the ensign if it is flying.

". . . don't enter wardroom or lounge out of uniform . . ."

". . . entering, juniors first—leaving, seniors first . . ."

What is the authority of the OOD?

The officer of the deck represents the captain and is responsible for the safety of the ship, subject to any orders he may receive from the captain.

Who is subordinate to the OOD?

With the exception of the executive officer, every officer or other person on board ship who is subject to the orders of the commanding officer, whatever his rank, is subordinate to the OOD.

• Wardroom Etiquette

Serving both as the commissioned officers' mess and lounge room is the wardroom. Usually the president of the mess is the executive officer. On very small ships the captain sits at the wardroom mess table and is president of the mess.

How are officers assigned seats at the mess table?

Officers are assigned permanent seats at the mess table, alternately, in order of rank to the right and left of the presiding officer. An exception is the mess treasurer, who occupies the seat opposite the presiding officer. The second ranking officer sits on the right of the presiding officer, third ranking officer sits on the left, and so on.

What are some of the rules of etiquette that should be observed in the wardroom?

Some of the main rules to be observed in the wardroom are:

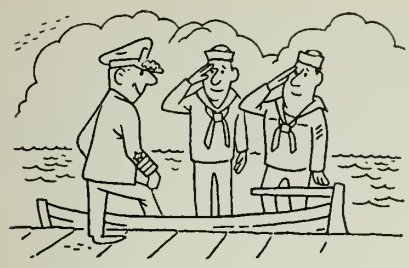
Don't loiter during working hours.

Remain uncovered.

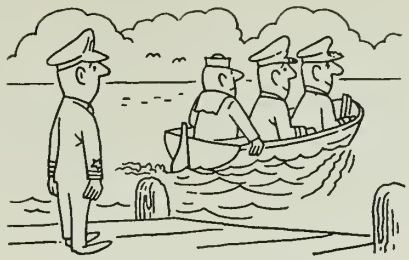
Pay mess bills promptly.

Don't enter or lounge while out of uniform.

". . . don't wear a cap in the wardroom . . ."



". . . enlisted boat passengers rise and salute officer . . ."



". . . do not attempt to overcrowd boats—catch next boat . . ."

"senior boat has right of way . . ."

Introduce guests to wardroom officers, especially on small ships.

Don't be late for meals. If you are unavoidably late, make your apologies to the presiding officer.

Wait for the presiding officer to sit down to meals before you sit down. (Exception: breakfast.)

If necessary to leave before the completion of the meal, ask to be excused.

Don't be boisterous or loud.

Don't talk ship continuously. (As the British say: "No shop in Mess.")

In general, the young officer pursues the best course by being the best listener in the mess. An attitude of frank admission of ignorance in certain features of wardroom etiquette is much more respected by fellow officers than assuming a presumptuous attitude and continually making blunders.

• Boat Etiquette

What is the proper order to be followed when entering and leaving boats?

Boats are entered in inverse order of rate and rank—the junior man or officer enters first. Leaving the boat, seniors go first.

What are the rules of courtesy in seating in boats?

In general, seniors are accorded the best seats in the boats and juniors take care to give seniors sufficient room. If the situation is appropriate, the junior officer gives his seat to the senior, and if the boat is crowded, juniors get in the next boat.

When a senior officer is present, do not sit in the stern sheets unless invited to do so. Don't make last-second dashes down the accommodation ladder to enter a boat. Get in the boat a minute or so before the boat gong—or when the OOD says the boat is ready.

If another boat is at the boat landing and takes all the landing frontage, what should be done?

Under conditions of urgency it is proper to ask permission to use the thwarts, gunwales and decking of the other boat as a walk-way. However, permission is not requested if it can be avoided. The oncoming boat would ordinarily lie off and wait for the other boat to clear the landing.

• Etiquette Ashore

Naval courtesy ashore in many respects parallels shipboard practice. Rules regarding walking with seniors are the same ashore as afloat-juniors to the left.

What is the correct procedure for getting in and out of automobiles?

On entering and leaving an automobile, follow the same procedure as for boats; juniors first in, last out.

An ensign and a lieutenant would get into an automobile in that order. The ensign takes the seat in the far corner to leave room for the lieutenant near the door. When they get out, the lieutenant would leave first.

What is the correct procedure for entering buildings?

On entering buildings, the order is reversed. The junior opens doors for the senior and enters last.

• Officers' Social Calls

Although an officer reporting aboard ship or at a naval station may have already seen the commanding officer in person he must also make a visit of courtesy within 48 hours.

Should an officer consult any one about the visit of courtesy before visiting the CO?

He should consult the executive officer as to the time most convenient to pay the visit of courtesy to the CO. Sometimes COs, pressed for time, temporarily discontinue courtesy calls.

How long should the visits of courtesy last?

Limit them to about 10 minutes unless resquested to remain longer. During this visit, the officer should be attentive and polite but not servile or wooden. Although the host should be allowed to direct the conversation the visiting officer should add more to it than simple affirmatives and negatives.

What type questions should the visiting officer avoid asking during the visit of courtesy?

Avoid asking questions concerning the new duty, problems facing the host and intimate questions on the host's private life. Do not prolong your visit. Young officers, because of a natural timidity, often lack the confidence to excuse themselves and leave promptly when the time comes to take departure from the visit.

What is considered proper for the junior officer to say when he makes a call upon his commanding officer?

On meeting the captain say, "Captain, I came to pay my respects." To the captain's orderly before entering the cabin say. "Tell the Captain that Ensign Wolcott would like to pay his respects."

How long should social calls be?

When a junior officer attached to a small activity ashore makes a social call on his senior officer in the senior officer's home, the call

". . . pay mess bills promptly . . ."

". . . don't loiter in wardroom during working hours . . ."

How to Address and Introduce Naval Personnel

Person addressed or introduced	TO MILITARY PERSONNEL		TO CIVILIANS	
	Introduce as:	Address As:	Introduce as:	Address As:
MALE OFFICER (CDR or above)	"Captain (or appropriate rank) Smith"	(same)	"Captain Smith"	(same)
MALE OFFICER (LCDR or below)	"Mr. Smith"	(same)	"LCDR Smith"	"Mr. Smith"
WOMAN OFFICER (CDR or above)	"CDR (or appropriate rank) Smith"	(same)	"Commander Smith"	(same)
WOMAN OFFICER (LCDR or below)	"Miss (or Mrs.) Smith"	(same)	"LCDR Smith"	"Miss (or Mrs.) Smith"
MEDICAL CORPS OFFICER (CDR or above)	"CDR Smith" or Dr. Smith"	(same)	"Commander Smith" or "Dr. Smith"	(same)
MEDICAL CORPS OFFICER (LCDR or below)	"Dr. Smith"	(same)	"LCDR Smith, of the Navy Medical Corps"	"Dr. Smith"
CHAPLAIN CORPS OFFICER	"Chaplain Smith"	(same)	"Chaplain Smith"	(same)
NAVY NURSE CORPS OFFICER (CDR or above)	"CDR (or appropriate rank) Smith"	(same)	"Commander Smith of the Navy Nurse Corps"	"CDR Smith"
NAVY NURSE CORPS OFFICER (LCDR or below)	"Miss (or Mrs.) Smith"	(same)	"LCDR Smith, of the Navy Nurse Corps"	"Miss (or Mrs.) Smith"
U. S. PUBLIC HEALTH SERVICE OFFICER (M.D. or dentist)	"Dr. Smith"	(same)	"Dr. Smith, of the Public Health Service"	"Dr. Smith"
U. S. PUBLIC HEALTH SERVICE OFFICER (Sanitary Engineer)	"Mr. Smith"	(same)	"Mr. Smith, of the Public Health Service"	"Mr. Smith"
COMMISSIONED WARRANT OFFICER	"Mr. Smith"	(same)	"Warrant Officer Smith"	"Mr. Smith"
MIDSHIPMAN	"Mr. Smith"	(same)	"Midshipman Smith"	"Mr. Smith"
WARRANT OFFICER	"Mr. Smith"	(same)	"Warrant Officer Smith"	"Mr. Smith"
CHIEF PETTY OFFICER	"Chief Machinist's Mate Smith"	"Smith or Chief Smith"	"Chief Machinist's Mate Smith"	"Mr. Smith"
AVIATION CADET	"Aviation Cadet Smith"	"Mr. Smith"	"Aviation Cadet Smith"	"Mr. Smith"
PETTY OFFICER	Use name and rate, as: "Smith, Gunner's Mate, 2nd	"Smith"	"Gunner's Mate Smith" or Petty Officer Smith"	"Mr. Smith"
SEAMAN	"Seaman Smith"	"Smith"	'Seaman Smith"	"Mr. Smith"

NOTES: When not in uniform a captain or lieutenant would be introduced as "of the Navy" to distinguish his rank from a similar-sounding rank of the other armed services.

A suggested form of introduction is: "This is Lieut. Comdr. Smith. Mr. Smith is now stationed here." This indicates both (a) the officer's rank and (b) how to address him.

If a senior officer of the Medical Corps prefers to be addressed as "Dr.," such preference should be honored.

In any case where you had reason to believe the Dr.'s insignia might not be recognized, it would be correct to add"—of the Public Health Service" in introducing him.

should be limited to a half-hour. During this call a junior may learn a lot about his senior's interests and hobbies. In general, a better mutual understanding is formed between the senior and junior. For the time being, rank is relegated to the background as the senior relaxes and sets an informal note.

An officer invited to dinner should take particular pains to be punctual and to leave before he wears out his welcome. It is not necessary to stay all afternoon or evening.

At parties or other social functions where the CO is present, it is not considered good taste to leave before he does.

What if it is necessary to leave a social function before the captain leaves?

Respects are paid to the captain before departing when it is necessary to leave before he does.

- **Courtesy to Ladies**

In general, most questions of courtesy brought about by the presence of women in the military serv-

". . . military courtesy means deference to women . . ."

ices can be solved simply: The rules of military courtesy apply and rank takes precedence.

Military courtesy also includes deference to women. Since a senior's wish is also an implied command, there may be occasions when a senior male officer will indicate that he prefers courtesy to women above strict military usage. In such cases the junior woman acts accordingly without any hesitation or embarrasing counter-deference.

Does a serviceman walking with a woman give her the position of honor (at his right) or does he walk on the street side?

Here military custom varies with civilian custom and the decision rests on your own judgment. When walking with a woman, you give her the same place of honor you would give a senior office—on his right. But for many years it has been customary in civilian life for men

to take the outside of the walk, a procedure dating back to the days of horse-drawn carriages, when the man acted as a protective shield—not only against flying mud, but also against the danger of fast-moving horses and carriages.

". . . take position to left or outside when walking with a lady . . ."

Although you give the woman the position on your right, it often happens that the woman will be on the outside of the walk. In a case where this would seem to be withholding a common courtesy, you should take the outside position. Either position—on the outside (with the woman to the left) or on the inside (with the woman to the right) is correct.

When walking with a woman do you offer her your arm?

Only when appropriate, such as when it is necessary to assist her through heavy traffic, over rough ground or on steep stairways.

Many women prefer (and some books of etiquette teach) that the man place the palm of his hand lightly under the woman's elbow, rather than "offer the arm." The latter gesture requires that the man form a crook with his arm. The

". . . remain covered when talking with lady on the street . . ."

woman then either grasps the man at the elbow or puts her forearm through the crook.

What is the proper position for the man to take when walking with two women?

You lucky fellow! When walking with two women, you may follow one of two practices and be correct in either case. You may follow the newer practice, walking in the center. Or you may take the position on the outside—the traditional practice.

If a woman is walking with two men what position should she take?

In the center, usually.

When walking with a woman in uniform on a military occasion do you, if you are senior, give her the positon of honor on your right?

On a military occasion—no. If you were on the drill field and were walking out to accept an award or commendation, you would put the woman on your left if you were senior. If she were senior (or had military or command precedence, in the case of enlisted personnel) then, however, she would take the position on the right, as a matter of course.

On a street car or bus should a serviceman get up and offer a woman his seat, even if she is in uniform and his junior?

This is not so much a matter of

". . . keep hats on in crowded elevators—if others uncover, follow example . . ."

military courtesy as every-day courtesy. The man in uniform is usually the most conspicuous person on the vehicle and his actions are often the subject of comment. The courtesies you extend reflect not only on you, but on the Navy as a whole. No one will reprimand you if you don't give up your seat; no one will commend you if you do. But as a military man, you'll probably feel somewhat ill at ease and embarrassed if you don't.

Should service personnel remove their hats in elevators when women are present?

A good general rule to follow is this: If civilian men in the elevator remove their hats, remove yours. If they leave their hats on, follow suit.

• Forms of Address and Introductions

The methods of addressing and introducing military personnel differ slightly according to whether you are in military or civilian circles at the time. On a day-in day-out basis, the military custom predominates.

How should naval officers be addressed in official communications?

Navy Regs states that every officer in the naval service shall be designated and addressed in official

". . . rise when a lady stops at your table . . ."

communications by his or her grade.

However, in oral official communications male officers below the grade of commander in the Navy and captain in the Marine Corps may be addressed as "Mister _____" and female officers of similar grade as "Miss_____" or "Mrs. _____."

Navy Regs further states that officers of the Medical and Dental Corps may be addressed as "Doctor _____" and officers of the Chaplain Corps as "Chaplain _____," as appropriate. In fact, when addressing officers of the Medical, Dental or Chaplain Corps you will be following the accepted practice if you say "Doctor _____" or "Chaplain _____." This holds true whether the officer be an ensign, a lieutenant commander or an admiral.

". . . ask permission of seniors and ladies before smoking . . ."

What is the proper method of addressing a woman officer?

As with male officers, a woman officer of captain or commander rank is introduced by title and rank and is addressed by military personnel in the same manner. Those below the rank of commander are introduced as "Miss_____" or Mrs. _____." If the marital status of a woman officer below the rank of commander—including those of

the Nurse Corps (but not the Medical Corps)—is not known, the title of her rank is used when addressing her.

What is the correct response to a questian fram a woman officer?

"Yes, ma'am" or "No, ma'am" as appropriate.

How do you address officers of the U. S. Public Health Service?

". . . knowing when to salute gives a man self-confidence . . ."

Officers of the U. S. Public Health Service who are MDs or dentists are addressed and introduced as "Dr. _____," regardless of their rank. If an officer of the Public Health Service is in the sanitary engineer branch, "Mister _____," is used.

What is the correct method of addressing a chief warrant officer or warrant officer?

CWOs and WOs are *always* called "Mister." They are never addressed as "Chief _____." They are introduced to military personnel as "Mister" and to civilian personnel as "Warrant Officer _____."

Is "Mister _____" used for midshipmen?

Yes, midshipmen are addressed and introduced to miltary personnel

". . . courtesy still holds, in uniform or not . . ."

as "Mister." To civilians, however, they are introduced as "Midshipman _____."

As a general practice is it preferable to call a senior by his title and name?

Yes, "Commander _____" or "Mister _____" would be used rather than the impersonal "sir." In prolonged conversation where the repetition of the longer form would seem awkward or forced, the shorter "sir" is brought into use.

In areas where a large number of officers of these ranks are encountered, the use of "captain" or "commander" is often heard. However, you would not address an officer below the rank of commander by his title alone.

What is the carrect way ta address enlisted persannel?

As with officers, the correct form for addressing or introducing enlisted personnel depends upon the prevailing circumstances. Under military conditions, enlisted personnel, both men and women, are addressed by officers of their own ship or station by last names only. When addressed by an officer not attached to their local organization and the last name is not known, CPOs are addressed as "Chief." CPOs are customarily addressed as "Chief" by first class POs and lower rates.

". . . courtesy works both ways . . ."

In a social gathering it is customary for those outside the service to extend to any enlisted man or woman the same courtesies they would naturally have extended to them in civil life. Civilians would feel unnecessarily curt in addressing any enlisted man or woman by last name alone. In such cases, "Mr." "Miss," or "Mrs." is ordinarily prefixed to the person's last name.

What is the proper style used in introducing CPOs, other petty officers and non-rated personnel ta military and civilian personnel?

In introductions to military personnel, the proper style is to introduce CPOs as "Chief Printer Dempsey"; other POs as "Tunney, Molder 1st"; non-rated as "Fireman Louis."

The above style holds true when introducing CPOs, other POs and non-rated personnel to civilians—with one exception. A first, second or third class PO would be introduced as "Boatswain's Mate Brown" or "Petty Officer Brown."

How da civilians address enlisted persannel?

They usually address enlisted personnel as "Mr.," "Miss," or "Mrs." In actual practice, most introductions are likely to occur on a less formal basis than prescribed in rules and with first names playing a prominent role.

• **Conclusian**

These customs, rules of etiquette,

". . . when several officers are saluted, all return it . . ."

matters of honor and tokens of courtesy vary to an exceeding degree in their compulsion.

The person who disregards the above rules will sooner or later be marked as careless, lazy or stupid, and eventually his service career will be marred. The fact is that the vast majority of Navymen and Navy women take a strong pride in rules and customs—and follow them.

Some of the rules are not followed as closely in smaller ships as in larger ships. Then, too, the degree of following these rules varies under conditions of operation. At times the eyes of the entire port are on you and your ship; at other times you are a thousand miles at sea. Until you are aware of all the variations

". . . saluting is a friendly gesture . . ."

that may exist, you should take no chances.

A ship that stands into port making use of the marker buoys doesn't get off the shipping channel and disgrace itself by running aground. The above rules are your marker buoys. In following the rules of courtesy you do credit to yourself, your uniform and the Navy.

★ ★ ★ ★ TODAY'S NAVY ★ ★ ★ ★

New ASW Defense Groups

Two new Antisubmarine Defense Groups—*Bravo* and *Charlie*—have been added to the Atlantic Fleet.

They have been operational since 15 October, under the control of VADM William G. Cooper, USN, Commander of the Atlantic Fleet Antisubmarine Defense Force. It is the mission of these two new groups to concentrate on specific antisubmarine warfare problems and tactics in order to improve the state of antisubmarine readiness in the Atlantic Fleet (See January issue, p. 5).

Fleet units will be assigned to the new task groups on a semi-permanent basis, providing greater stability in the assignment of units, and efficiency in exploitation of new equipment. Both of the new groups are similar in concept and organization to Antisubmarine Defense Group *Alfa*, formed last March under the command of RADM J. S. Thach, USN.

Task Group *Bravo* will concentrate on accelerating and developing antisubmarine hunter-killer (HUK) tactics, doctrine and equipment. Group *Charlie* on the other hand will have a similar mission but will deal with convoy escort tactics involving joint operations with destroyers and patrol aircraft.

Task Group *Bravo*, commanded by RADM E. A. Hannegan, USN, Commander Carrier Division 14, is made up of the antisubmarine aircraft carrier USS *Wasp* (CVS 18) with a squadron of fixed-wing ASW aircraft and a squadron of ASW helicopters embarked.

In addition to the carrier *Wasp*, Task Group *Bravo* will consist of Destroyer Squadron 24 composed of the destroyers USS *Fred T. Berry* (DDE 858), *Norris* (DDE 859), *McCafferey* (DDE 860), *Blandy* (DD 943), *Lloyd Thomas* (DDE 764), *Keppler* (DDE 765), and *Harwood* (DDE 861), all home-based at Newport, R. I.; Antisubmarine Squadron 31 from Quonset Point, R. I., made up of S2F *Tracker* aircraft; Helicopter Antisubmarine Squadron 11, also from Quonset Point; and six P5M *Marlin* patrol seaplanes from Patrol Squadron 56 based at NAS Norfolk.

TURN ABOUT—*USS Constitution* is shown on her annual voyage from mooring in Boston Naval Shipyard as she is turned to keep sun from warping her masts.

Task Group *Charlie* will be commanded by RADM L. M. Mustin, USN, who is at present Commander Destroyer Flotilla Two. It will consist of the frigate USS *Mitscher* (DL-2); Escort Squadron 14 composed of the escort vessels USS *Van Voorhis* (DE 1028), *Lester* (DE 1022), *Joseph K. Taussig* (DE 1030), and *Hartley* (DE 1029), based at Newport; and six P2V-7 *Neptune* patrol planes from Patrol Squadron 11 based at NAS Brunswick, Maine. Escort Squadron 10, consisting of the escort vessels USS *Dealey* (DE 1006), *Cromwell* (DE 1014), *Hammerberg* (DE 1015), and *Courtney* (DE 1021), is scheduled to join Task Group *Charlie* about 1 May 1959.

Individual ship assignments to these groups will, of course, vary.

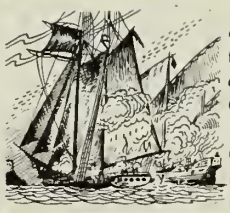
Inshore Minesweeper

When the inshore minesweeper *Cove* (MSI 1) was placed in service last November at Seattle, Wash., it became the first ship of a new class of Navy ships designed for minesweeping operations close inshore.

As more of this type of ship are built, they are expected to replace MSCs on inshore minesweeping duties. This will enable MSCs to join their ocean-going "sisters" for minesweeping duties further offshore.

Cove, smaller than current coastal minesweepers, weighs in at 249 tons. She is 111 feet long, has a 23-foot beam and a maximum draft of 10 feet. Her diesel engines develop 650-shaft horsepower which boosts her up to 12 knots. She has a complement of three officers and 18 men.

YESTERDAY'S NAVY



On 3 Mar 1815 the United States declared war on Algiers and ordered a squadron under Commodore Stephen Decatur to the Mediterranean. On 3 Mar 1819 a law was passed setting up a system for naming Navy ships. On 9 Mar 1847 the Navy landed General Winfield Scott's army at Vera Cruz, Mexico. On 20 Mar 1920 USS Maryland (BB46) was launched at Newport News, Va. On 31 Mar 1941 the South Greenland Survey Expedition arrived in Greenland to locate and recommend sites for military and naval installations and to gather hydrographic information.

News of Navy Ships

You've heard a lot of talk about "The New Navy." It would be more precise to call it "The Modern Navy," since not only is the Navy building new ships, but also incorporating new ideas in older ships, and completely converting others.

Heading the list of new submarines is **USS *Skipjack*, SS(N) 585**, which is due to be commissioned at Groton, Conn., during the first quarter of 1959. The sixth nuclear-powered sub, this 2850-ton underseas ship is the first of a series of seven high-speed attack submarines. She represents a marriage of the tear-drop hull with a nuclear engine. With these two features united, SS (N) 585 will actually "fly" underwater as an airplane flies through the air. She'll be capable of outmaneuvering the fastest surface ship afloat and will be able to cruise submerged at speeds "in excess of 20 knots."

Every projection of *Skipjack* has been eliminated, except for her thin, dorsal-fin-like fairwater (the submarine's sail on superstructure). Her round hull has a minimum of flat deck surface and her diving planes are built into the fairwater instead of the hull.

Skipjack's top speed will be achieved by means of a single propeller. All the other active nuclear submarines, and all conventional subs (except USS *Albacore*, AGSS 569), are driven by twin screws.

Submarines are normally named for marine life. The names of the first nuclear-powered Fleet ballistic missile submarines, scheduled to go to sea in 1960, will be different, however. They will be named **USS *George Washington, Patrick Henry, Theodore Roosevelt, Robert E. Lee and Abraham Lincoln.***

Especially designed to fire *Polaris* missiles from both submerged and surface positions, two of these subs are being built at Groton, Conn. The other three are under construction at Mare Island, Calif., Newport News, Va., and Portsmouth, N. H. Four more, authorized by Congress, are still unassigned.

Each of the five Fleet ballistic missile submarines, SSB(N) 598, 599, 600, 601, and 602, will be 380 feet long and will be propelled by a water-cooled reactor. The first three will displace 5400 tons, while the other two will displace 5600 tons.

SSB(N) 602 was the last of the group to have her keel laid. This 5600-ton submarine will cost an estimated 100 million dollars and will take two-and-one half years to build. An average of 700 Portsmouth employees will be on the job each day.

These five SSB(N) types will be among the largest submersibles ever constructed—with a displacement approximately twice that of *Nautilus*. They are designed to fire the *Polaris* intermediate range ballistic missile 1500 miles to a target.

Five nuclear subs are familiar to the Fleet: **USS *Nautilus*, SS(N) 571**;

Here's Latest Rundown on Navy's Nuclear Ships

Today, the nuclear Navy is a reality. We have five nuclear ships in commission, another is expected to join the Fleet any day, and two more are in the water. All eight are submarines; 25 more are being built or have been authorized.

Our nuclear surface Fleet—now under construction—consists of a guided missile cruiser, an aircraft carrier and a guided missile frigate.

Here's a box score on our nuclear Navy:

Type, Number and Name	Estimated or Actual Commissioning Date
3180-Ton Attack Class Submarine	
SS(N) 571, USS *Nautilus*	30 Sep 1954*
3260-Ton Attack Class Submarine	
SS(N) 575, USS *Seawolf*	30 Mar 1957*
2310-Ton Attack Class Submarines	
SS(N) 578, USS *Skate*	23 Dec 1957*
SS(N) 579, USS *Swordfish*	15 Sep 1958*
SS(N) 583, USS *Sargo*	1 Oct 1958*
SS(N) 584, USS *Seadragon*	December 1959
2850-Ton High Speed Attack Class Submarines	
SS(N) 585, USS *Skipjack*	January-March 1959
SS(N) 588, USS *Scamp*	December 1960
SS(N) 589, USS *Scorpion*	May 1960
SS(N) 590, USS *Sculpin*	Undetermined (About May 1960)
SS(N) 591, USS *Shark*	Undetermined (About November 1960)
SS(N) 592, USS *Snook*	Undetermined (About January 1961)
SS(N) 593, USS *Thresher*	December 1960
2490-Ton High Speed ASW Submarine	
SS(N) 597, USS *Tullibee*	August 1960
Guided Missile Submarines	
SSG(N) 587, USS *Halibut*	December 1959
SSG(N) 594, USS *Permit*	October 1961
SSB(N) 598, USS *George Washington*	December 1959
SSB(N) 599, USS *Patrick Henry*	March 1960
SSB(N) 600, USS *Theodore Roosevelt*	May 1960
SSB(N) 601, USS *Robert E. Lee*	September 1960
SSB(N) 602, USS *Abraham Lincoln*	December 1960
SSG(N) 595, USS *Pollack*	Authorized, but as yet, no contract has been awarded for their construction.
SSG(N) 596, USS *Plunger*	
SS(N) 603	Authorized, unnamed, and no contract awarded (except for SS(N) 606).
SS(N) 604	
SS(N) 605	
SS(N) 606	
SSG(N) 607	
SSB(N) 608	
SSB(N) 609	
SSB(N) 610	
SSB(N) 611	
5450-Ton Radar Picket Submarine	
SSR(N) 586, USS *Triton*	April 1959
Guided Missile Cruiser	
CG(N) 9, USS *Long Beach*	Undetermined (About November 1960)
Attack Aircraft Carrier	
CVA(N) 65, USS *Enterprise*	Undetermined (About November 1960)
Guided Missile Frigate	
DLG(N) 25 (Unnamed)	Undetermined (About January 1962)

*Denotes actual commissioning date.

Seawolf, SS(N) 575; **Skate**, SS(N) 578; **Swordfish**, SS(N) 579; and **Sargo**, SS(N) 583. Three more have been launched: **USS Seadragon**, SS(N) 584; **Skipjack**, SS(N) 585 (due to be commissioned early this year); and **USS Triton**, SSR(N) 586. Another one—**USS Halibut**, SSG(N) 587—is slated to be launched this month at Mare Island, Calif.

USS Barbel (SS 580), a diesel-driven, high-speed submarine, has been commissioned at Portsmouth, N. H., in January. She has the *Albacore* hull, is 219 feet-two inches long, has a beam of 29 feet and displaces 2300 tons. She has a submerged speed of 25 knots.

One of the last conventionally powered submarines to be built, **USS Bonefish** (SS 582), was launched in November. Only one more conventionally powered submarine still remains unlaunched. She is **USS Blueback** (SS 581), which is slated to slide down the ways in March of this year; thus ending the era of diesel submarine construction.

One of the modern surface ships today is the guided missile frigate. In December the fifth guided missile frigate, **USS Luce** (DLG 7), was launched at Quincy, Mass. Already launched are **USS Farragut** (DLG 6), **Coontz** (DLG 9), **King** (DLG 10) and **Dewey** (DLG 14).

Nuclear power will soon be added to the guided missile frigate. The first DLG(N) is scheduled to be delivered to the Navy in January 1962. She will have a much greater cruising range at sustained high speeds than conventionally-powered frigates. She will have twin *Terrier* missiles mounted fore and aft, in addition to antisubmarine weapons and conventional armament. The new nuclear-powered ship will be in excess of 550 feet long, have a beam of 56 feet and will displace 7600 tons.

Two other nuclear-powered surface ships are already being constructed. They are the guided missile cruiser **Long Beach**, CG(N) 9 (the U. S. Navy's first nuclear-powered surface ship), scheduled to be launched in July of this year, and **Enterprise**, CVA(N) 65, due to be launched in June 1960.

The fourth ship of the *Forrestal* class of attack aircraft carrier, **Independence** (CVA 62), was commissioned last month. In a gala ceremony at New York Naval Shipyard this giant floating airfield was commissioned on 10 January. (For a complete story on *Independence*, see ALL HANDS, August 1958 issue, page 59.)

KEEPING UP WITH THE TIMES—Guided missile ship, *USS Norton Sound* (AVM 1) former seaplane tender, sails Pacific out of home port, Port Hueneme, Calif.

USS Edson (DD 946) has been commissioned at Boston, Mass. The 2800-ton ship was built at Bath, Maine, and is named for a Medal of Honor winner, Major General Merritt A. Edson, USMC. This destroyer was launched in January 1958.

The inshore minesweeper **USS Cove** (MSI 1), which was built at Bellingham, Wash., has been placed in service. An ammunition ship, **USS Pyro** (AE 24), was launched in November at Baltimore, Md. The 7470-ton ship has a cargo capacity of 7500 tons, is manned by about 20 officers and 330 enlisted men and has air-conditioned living and working spaces.

Scheduled to be launched during December and January are two utility landing craft, **LCU 1613** and **LCU 1614**.

Another surveying ship, **USS Dutton** (T-AGS 22), was placed in service in November. She is the sister ship of **USS Bowditch** (T-AGS 21) which went into service in October. A third sister, **USS Michelson** (T-AGS 23), joined these two in December. All three have been converted from

Roster of New and Converted Ships Joining The Navy

New or converted ships, commissioned or placed in service, go to keep the Navy modern. From January through November last year the following ships joined the Navy:

New Ships	Commissioned
Mullinnix (DD 944)	3-7-58
Hull (DD 945)	7-3-58
Edson (DD 946)	11-7-58
Hooper (DE 1026)	3-18-58
Graham County (LST 1176)	4-17-58
De Soto County (LST 1171)	6-10-58
Lorain County (LST 1177)	10-3-58
Venture (MSO 496)	2-3-58
Advance (MSO 510)	6-16-58
Ability (MSO 519)	8-4-58
Alacrity (MSO 520)	10-1-58
Assurance (MSO 521)	11-21-58
Grayback (SSG 574)	3-7-58
Growler (SSG 577)	8-30-58
Swordfish, SS(N) 579	9-15-58
Sargo, SS(N) 583	7-1-58
MSI 1	*11-20-58
YP 654	*3-10-58
YP 655	*4-20-58
YP 656	*5-15-58
YP 657	*6-26-58
YP 658	*6-28-58
YP 659	*7-23-58
YP 660	*9-29-58
YP 661	*10-6-58
YP 662	*10-6-58
YP 663	*11-15-58
Converted Ships	
Interdictor (AGR 13)	4-7-58
Interpreter (AGR 14)	9-29-58
Interrupter (AGR 15)	10-16-58
Bowditch (T-AGS 21)	**10-8-58
Dutton (T-AGS 22)	**11-1-58
Paul Revere (APA 248)	9-3-58
Galveston (CLG 3)	5-28-58

* Not actually commissioned. These ships were merely placed in service on these dates.

** Placed in service on this date. These ships will be operated by the Military Sea Transportation Service.

merchant type ships and will be operated by the Military Sea Transportation Service.

Another ship commissioned now is the **USS Observation Island** (EAG 154) which was commissioned in December. **USS Claud Jones** (DE 1033), **Cape** (MSI 2) and **Watchman** (AGR 16) are slated for January commissioning. (Actually *Cape* will only be placed in service.)

The guided missile cruiser **Albany** (CG 10), which has been at the Boston Navy Yard since April 1958, started her conversion to a guided missile cruiser (*Talos*) last month. Two other cruisers, **Chicago** (CG 11) and **Columbus** (CG 12), are due to start their conversion programs during the first half of this calendar year. These ships were formerly CA 123, CA 136 and CA 74.

Also in the field of modernization, **USS Oriskany** (CVA 34) is now undergoing a two-year, 40-million-dollar face-lifting at San Francisco, Calif. For the first time on any ship,

Fleet Bids Fonds Farewell to These Ships Going into Reserve

Some sixty ships were placed Out of Commission In Reserve (OCIR) between January and the latter part of 1958. Part of these ships had started their decommissioning process during 1957.

When a ship reports to the Atlantic or Pacific Reserve Fleet to start the mothballing process, it's considered In Commission In Reserve (ICIR). These ships actually remain in commission for several weeks or months until "buttoning up" is completed. The crews are gradually dispersed until, by the end of inactivation, or the OCIR date, virtually no one is left on board.

The formal decommissioning occurs on the OCIR date. Sometimes there's a ceremony, but more often there is none; it all depends on the ship and local interest.

Ships retired to the Reserve Fleet during 1958 were the following:

SHIP'S NAME	ICIR (In Commission in Reserve)	OCIR (Out of Commission in Reserve)
Mauna Loa (AE 8)	9-16-58	Not decommissioned
Karin (AF 33)	10-15-58	Not decommissioned
Merapi (AF 38)	11-17-58	Not decommissioned
Virgo (AKA 20)	1-15-58	5-8-58
Algol (AKA 54)	10-1-57	1-2-58
Uvalde (AKA 88)	9-30-58	1-2-58
Whiteside (AKA 90)	11-1-57	2-1-58
Yancey (AKA 93)	12-2-57	3-1-58
Proton (AKS 28)	1-2-58	4-22-58
Chimon (AKS 31)	1-22-58	4-22-58
Hazel (AN 29)	12-18-57	2-11-58
Kishwaukee (AOG 9)	1-2-58	4-2-58
Telfair (APA 210)	12-2-57	2-22-58
Bowers (APD 40)	10-1-58	Not decommissioned
Lloyd (APD 63)	12-3-57	2-28-58
Knudson (APD 101)	10-9-57	1-2-58
Baldwick (APD 132)	11-29-57	2-28-58
Burdo (APD 133)	12-3-57	2-28-58
Weiss (APD 135)	12-2-57	2-22-58
Carpellotti (APD 136)	1-9-58	4-21-58
Kenneth Whiting (AV 14)	7-8-58	9-30-58
Iowa (BB 61)	10-24-57	2-24-58
Wisconsin (BB 64)	11-8-57	3-8-58
Albany (CA 123)	4-1-58	For conversion to CG
Salem (CA 139)	10-8-58	Not decommissioned
Worcester (CL 144)	9-3-58	Not decommissioned
Roanoke (CL 145)	7-1-58	10-31-58
Philippine Sea (CVS 47)	8-22-58	Not decommissioned
Yarnall (DD 541)	7-1-58	9-30-58
Owen (DD 536)	1-31-58	5-27-58
Stephen Potter (DD 538)	2-28-58	6-13-58
Erben (DD 631)	2-27-58	6-27-58
Stembel (DD 644)	2-3-58	5-27-58
Healey (DD 672)	10-3-57	3-11-58
Irwin (DD 794)	10-11-57	1-10-58
Ulvert M. Moore (DE 442)	7-1-58	10-10-58
Goss (DE 444)	7-11-58	10-10-58
Silverstein (DE 534)	11-5-58	Not decommissioned
Spangler (DE 696)	7-11-58	10-8-58
George (DE 697)	7-9-58	10-8-58
William T. Powell (DE 213)	10-9-57	1-17-58
Johnnie Hutchins (DE 360)	11-25-57	2-25-58
Rorbach (DE 364)	10-9-57	1-9-58
Haas (DE 424)	11-20-57	1-24-58
Cross (DE 448)	10-7-57	1-2-58
Heyliger (DE 510)	10-1-57	1-2-58
Edward H. Allen (DE 531)	10-1-57	1-9-58
Rizzi (DE 537)	11-25-57	2-25-58
Osberg (DE 538)	11-25-57	2-25-58
Thomas F. Nickel (DE 587)	11-26-57	2-26-58
Hemminger (DE 746)	11-25-57	2-21-58
Earl K. Olsen (DE 765)	11-24-57	2-25-58
Weeden (DE 797)	11-26-57	2-26-58
Shea (DM 30)	12-57	4-9-58
Gwin (DM 33)	1-13-57	4-3-58
Ashland (LSD 611)	11-1-57	1-25-58
Crook County (LST 611)	*	5-16-58
Hampden County (LST 803)	10-11-57	1-2-58
Iron County (LST 840)	11-23-57	Diverted to MAP
Pender County (LST 1080)	9-30-57	1-2-58
Blackbird (E-MHC 11)	5-19-58	7-15-58
Harkness (MHC 12)	2-3-58	4-2-58
James M. Gilliss (MHC 13)	5-31-58	8-7-58
Gull (MHC 46)	11-15-57	1-14-58
Merganser (MHC 47)	2-3-58	4-2-58
Waxbill (MHC 50)	5-1-58	6-30-58
Courser (MSCO 6)	2-3-58	4-2-58
Flamingo (MSCO 11)	2-3-58	4-2-58
Ostrich (MSCO 29)	1-3-58	3-5-58
Egret (MSCO 46)	2-3-58	4-2-58
Nightingale (MSCO 50)	1-6-58	3-7-58
Batfish (SS 310)	5-5-58	8-4-58
Besugo (SS 321)	1-8-58	3-21-58
Bonita (SSK 3)	8-15-58	11-7-58
Ray (SSR 271)	7-58	9-30-58

* Already in Reserve Fleet in caretaker status

she is having aluminum planking put on the after third of her flight deck. Aluminum was chosen because of its combination of strength and lightness. A new angled deck is part of her modernization. She will be back in service this year.

A change has been made in the ocean radar station ships. They are no more. Now, don't get the wrong idea, the ships have not gone, just the designation. As of 28 Sep 1958, all ocean radar station ships (YAGRs) became radar picket ships (AGRs). Their mission will remain the same, however.

The Navy's first nuclear-powered aircraft carrier, ***Enterprise,*** CVA(N) 65, will have what are believed to be the world's most powerful elevators. A $3,000,000 contract has been awarded for four elevators that will ferry jet attack and fighter aircraft to the flight deck of *Enterprise* at a top speed of four planes every minute. Hydraulically-powered, the elevators will weigh about one third of a million pounds each, and will have an area of almost 4000 square feet. Each will be capable of lifting a 45-ton aircraft from the hangar deck to the flight deck in 15 seconds.

The last three-ship heavy cruiser division has returned home to California to become a two-ship division. The three heavy cruisers, ***USS Bremerton*** (CA 130), ***Toledo*** (CA 133), and ***Saint Paul*** (CA 73), steamed 150,000 nautical miles with the U. S. Seventh Fleet in the Far East. In February 1959, USS *Bremerton* is due to shift to CRUDIV Three.

Bell on the Ball

Chief Electronics Technician James R. Bell, USN has been commended by the Secretary of the Navy "for outstanding performance of duty" after the ship's electronics equipment was damaged during a storm in the Mediterranean.

Chief Bell, who was on board USS *Manley* (DD 940) on 12 Dec 1957 when it was struck by a huge wave, was in charge of the electronics repair personnel. The huge wave rent *Manley's* port side and completely flooded the radar transmitter rooms, radio transmitter rooms and radio central, and caused minor flooding in all other electronics equipment areas.

Although the gear had been immersed in salt water, and some of it battered by the force of the wave, Chief Bell was responsible for restoring to use by 21 December nearly all the communications equipment and one radar.

For his actions Chief Bell was awarded the Commendation Ribbon with Metal Pendant.

CARRIER CAKE—Crew of *USS Kearsarge* celebrated sailing 100,000 miles since overhaul. L to r, J. A. Franks, BT3, G. L. Allen, MM3, and CO, CAPT W. A. Dean.

Marching Sailors

Who said "sailors can't march"?

That old adage is being exploded these days at NAS Moffett Field, Calif., by a 22-man precision drill team that was organized only last June. They have been piling up trophies and blue ribbons.

Made up of volunteer "typical sailors" of Moffett-based Fleet Aircraft Service Squadron Ten, the drill team was organized by its present leader, Gerald Jacobson, AQ1, USN. The team drills on its own 'liberty' time and fills most of its engagements on weekends and holidays.

Since its organization, the team has demonstrated its versatility, having performed on football fields, in parades, and on the stage.

WELL DONE—J. R. Bell, ETC, USN, is congratulated by RADM Harry Smith, ComDesFlot Four, on receiving Commendation Ribbon with Pendant.

Collecting Cold in the Antarctic

One of the coldest places in the world is the Antarctic. Yet, for some strange reason, men stationed there are seldom plagued with colds. Only at certain times do they come down with the symptoms which most of us, at one time or another, try to fight. Why this happens is a mystery.

Scientists believe that crews from visiting ships may be bringing cold viruses in. To prove their theory, and without breaking the routine duties of the ship, a medical group and two deep freezers are aboard the icebreaker USS *Staten Island* (AGB 5) on a seven-month trip to the Antarctic.

The medical group will gather and quick-freeze specimens of viruses connected with respiratory illnesses from volunteer crewmen of *Staten Island.* The specimens will be stored in the deep freezers. After arrival in Antarctic, specimens of cold viruses from men stationed there will be collected and preserved for comparison.

THE BULLETIN BOARD

Roundup for Navymen and Their Families Headed for U.K. Duty

LONDON is another one of those spots for which many apply but few are chosen. However, as with any other area with which you are not familiar, if you get off to a bad start, your entire tour of duty may be affected. The following run-down may give you some idea of what to expect.

Arrival in the U.K.—There are three ports of entry into the United Kingdom; Southampton for surface, and Blackbushe Airport, Hampshire, and Burtonwood Air Force Base, Lancashire, for air.

Surface Transportation—All MSTS ships moor at Southampton at approximately 0730. On MSTS ships that do not have money exchange facilities aboard, passengers should keep some U. S. currency until they arrive in London. Taxis and trains in Southampton will accept U.S. currency. However, if arrival is during banking hours, sterling may be obtained. (Up to 10 pounds in British currency may be brought into the country.) Arriving passengers will be met by a representative of the U.S. Navy from London, and directed to the train. Government transportation is not available from Southampton to London. You will be advised by the Navy Representative as to where your advance hotel reservations have been made. These reservations are made automatically. If you do not want these reservations you should contact the hotel and make necessary cancellations, otherwise, you will be liable for payment. Train service from Southampton to London is frequent and arrives in London (Waterloo Station) in about two hours. Train fare is about one pound ($2.80). British Railways has a special reduced rate for servicemen and their dependents, however, that cuts the fare approximately in half.

Passengers arriving on United States Lines (ss *America* and ss *United States*) usually arrive in the afternoon about 1500 and there is a special boat-train for these passengers to London. Again a Naval Representative will meet the ship, and advance hotel reservations will have been made.

Naval Air Flights — Blackbushe Airport is about 37 miles by road from London. The Overseas Transportation Office does not get a manifest for incoming flights and no hotel reservations are made. However, hotel reservations can be arranged during normal working hours through the hotel reservation clerk of U.S. Naval Facility upon arrival if desired. Government vehicle transportation to Grosvenor Square is provided for all incoming scheduled flights. There are no money conversion facilities at Blackbushe, but this can be taken care of in the Grosvenor Square area upon arrival (during normal working hours).

MATS Flights—Burtonwood is in Lancashire, about 182 miles from London. Train service is frequent and should be utilized in getting to London (Euston Station). The price is about 44 shillings (about $6.00), although reduced fares are again available. Advance hotel reservations are not made. But again, these can be obtained through the hotel reservation clerk of U.S. Naval Facility, London.

Reporting in London—Military personnel will not be expected to report in person to their respective personnel offices until 0815 of the day following their arrival in London.

F. Mercado, SKSN, USN

Saturday, Sunday, and holiday arrivals need not report physically until the following working day but must immediately report their arrival to the appropriate Duty Officer by telephone.

CINCNELM Duty Officer: MAYfair 9222, Ext. 39

COMNAVACTS Duty Officer: MAYfair 9222, Ext. 6

Passports—Apply for your passport at least six weeks prior to estimated time of departure. Dependents of both officers and enlisted personnel are required to submit documentary evidence of American citizenship with their application for a passport; photographs are also required. All dependents entering the United Kingdom are required to have passports. Children under 16 years of age may be included on their mother's passport.

All dependents are required by the United Kingdom police regulations to register within three months of their arrival in this country at the Aliens Registration Office, 10 Piccadilly Place, W.1., if resident in the Metropolitan Police area, otherwise at a local police station. Extra prints of the passport photograph should be obtained for use with the police registration.

Currency — Sterling (British money) is used in all civilian stores and hotels. The following is listed as a guide:

	Approximately
One pound (£) or 20 shillings (20s or 20/)	$ 2.80
One shilling (1s or 1/) or 12 pennies/pence (12d)	$ 0.14
Paper Notes:	
Five Pound	$14.00
One Pound	$ 2.80
Ten Shillings	$ 1.40
Coins:	
Half Crown (2s & 6d or 2/d)	$ .35
Two Shillings (2s or 2/)	$ .28
One Shilling (1s or 1/)	$ .14
Sixpence (6d)	$ .07
Threepence (3d)	$ .035
One Penny (1d)	$ .01
Halfpenny (½d)	$ .005

Many prices and services in Eng-

land are quoted in guineas. This is not a note or coin but is equal to 21 shillings (about $2.94).

Currency may be exchanged at the following places:

USAF Finance Office, from 0900 to 1600 weekdays; 0900 to 1200 Saturdays.

NAVFAC Disbursing Office, 7 North Audley St., W.1, from 0830 to 1600 weekdays.

Bank of America or Chase Manhattan Bank (located within easy walking distance of Grosvenor Square) from 1000 to 1500 weekdays and Saturday mornings.

Both the Enlisted Mens' Club, Douglas House, and the Officers' Club, Columbia Club, have exchange facilities that are open seven days a week.

Military Payment Certificates (scrip) are used only at authorized U.S. military establishments by authorized personnel in accordance with existing regulations. Military Payment Certificates are used only in the Navy Exchange Commissary, military clubs, etc. They are not to be used in the local civilian market.

Climate and Weather — Despite the northern latitude, the warm waters of the Gulf Stream which border the British Isles produce a cool, mild and, so far as the range of the thermometer is concerned, an equable climate. Seasonal extremes of temperature are much less than in the United States although within these extremes the weather is variable and changes may be sudden.

Except on rare occasions, the temperature does not go below 25 degrees in winter and, for the most part, the winter range is between 35 and 50 degrees. Although not extreme, the cold is very penetrating and there is far less heating in houses than in the United States. Americans should be prepared to find indoor temperatures in England some 10 to 15 degrees lower than at home, most Englishmen being quite happy where the thermometer registers around 55 degrees. This situation is best met by dressing as the English do.

There is occasionally a wave of high temperature in the summer, but it is very unlikely that there would be more than two or three weeks in which the thermometer would go over 75. Anything over 80 is exceptional. The average summer range is between 65 and 75 and fires are occasionally required during the summer months. Summer weather as the Americans know it is from June to August. The other nine months are cold or cool.

"From the halls of Quantico to the shores of Tripoli—USMC transfer order 31963."

The annual rainfall in London is much less than is often thought, averaging only about 26 inches. There are many more drizzly, cloudy, and foggy days than the rainfall would appear to warrant; it is these and the lack of sunshine, not the actual volume of rainfall, that have given the English climate its general reputation. The infrequent snowfalls in the vicinity of London are relatively light.

Clothing—Uniform—The working uniform for naval personnel is Service Dress Blue "A" but to conform with the Royal Navy Regulations, Service Dress Blue "B" is prescribed from 1 May to 1 October. In addition to the prescribed military uniform, personnel are permitted to work in civilian clothing. You may have occasion to visit the Mediterranean area and so should bring a full seabag when reporting for duty.

The Service Dress Blue uniform, with black bow tie, is suitable for smart formal occasions in England, as well as on the continent. In addi-

HOW DID IT START

Collapsible Yardarm

For the first time in many, many years one of our subs has a yardarm of her very own.

A prized possession of USS Sea *Devil* (SS 400), the unusual item was dreamed up by Wayne W. Wilson, QM1, and Harold F. Parnell, QM2, who felt that their old Fleet type sub needed something to set herself apart from other boats. The carpenter shop of USS *Nereus* (AS 17), on a work request okayed by Sea *Devil*'s skipper, LCDR L. A. Cravener, turned out a beautiful, eight-foot job made of laminated mahogany.

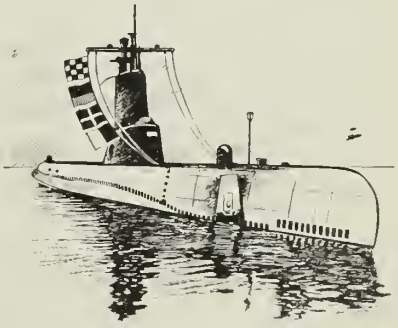
According to Wilson: "There wasn't a happier skipper in the entire submarine force than ours was when we finally got it installed."

Now, when Sea *Devil* enters or leaves harbor, she can fly flags and pennants from the yardarm just as the big surface ships do. This display has stirred up considerable interest among submariners, who are accustomed to identifying ships by their silhouettes. The first time Sea *Devil* steamed out of the channel in all her new finery, a quarermaster on one of the subs in Sea *Devil*'s own squadron asked, "What ship?"

"Another time," says Wilson, "we were just getting underway when morning colors was sounded. On another sub a chief who was rendering honors noticed the new yardarm just as 'carry on' sounded, and he was so puzzled by Sea *Devil*'s new look that he held his salute until the sub was far in the distance."

From the skipper—who looks to the yardarm for his absentee pennant whenever he leaves the ship—to the most junior seaman, everyone in Sea *Devil* takes pride in the sub's mark of distinction.

As a precaution against salt water damage Sea *Devil* only wears her yardarm in port and while entering or leaving the channel. When she's at sea her pride and joy is carefully stowed in the forward torpedo room.



tion to civilian clothing for wear, it is suggested that an officer include a dinner jacket in his wardrobe.

Civilian Clothing — Clothing for men is of very good quality and at a price commensurate with similar items in the United States. Most suits are of English style. If you are unable to find what you want in a ready-made suit, you can have one tailored at approximately the same price as those ready-made. However, it takes about six weeks to have a suit tailored. Military uniforms (blues) are much cheaper in England than in the United States and are believed to be of equal quality. Uniforms may be procured through the U.S. Navy Exchange tailor shop. Bring with you all medals you are entitled to wear.

Women's Clothing — It is suggested that you purchase the clothes you think you will need for your stay in London before you leave the United States. Women's clothing in England is cut differently and the sizes do not always conform to those in the United States. Sweaters and other woolens are in good supply and reasonable in price. It is suggested that you buy your shoes before leaving the United States. You may find it difficult to get a proper fit in commercial stores, but the Air Force Base Exchange at Ruislip stocks some ladies' shoes. Comfortable walking shoes are a must.

Children's Clothing — Adequate amounts of clothing and shoes should be brought with you. Clothing in the pajama, underwear, socks and shoe line suitable for the climate is readily available in the local stores, but it should be noted that the styles are different. Woolens are plentiful. If you enter a child in a British school, his school clothing is comparatively inexpensive and all of a good quality.

Packing—Everyone is cautioned to pack sufficient clothing to meet his needs for the first few weeks in London. Do not pack clothing which you will need upon your arrival with your household effects, since the latter often may be delayed in arriving. Also, the temporary quarters you occupy while looking for permanent housing may be too small to accommodate your hold baggage.

"What makes you think it's mine?"

Baggage—*Hold Baggage*—Those traveling to the United Kingdom by MSTS may bring with them on the ship the baggage which they would normally be allowed to carry free of charge on a railroad ticket. This amount is usually limited to 350 pounds for adults and 175 pounds for children under 16 years of age. Upon arriving in Southampton it is necessary that customs declarations be signed so that the baggage may be cleared through British Customs and Excise. The Navy collects and delivers hold baggage to the U.S. Navy Warehouse in London within 5 days after arrival. Three days are allowed for you to contact the Material Division (telephone MAYfair 9222, extension 925). If within that time owners do not inquire of their baggage, the Material Division will attempt to contact the owner to arrange for delivery to residence.

Cabin Baggage—You will be advised by your Navy Representative as to when you may disembark. After you have disembarked you will find your cabin baggage in the shed on the dock under the first letter of your last name. You must personally clear your own cabin baggage through customs.

F. Mercado, SKSN, USN

"I wish Supply would hurry up with those new pen sets we ordered."

Household Goods — Household goods may be shipped into the United Kingdom under NATO agreements. They are admitted free of customs duty. Household goods are normally shipped via commercial surface transportation under contract to MSTS and are at present routed via either Norfolk or Bayonne. The port of entry is normally London. The average length of time that household goods remain in transit is 8 to 10 weeks. An additional 10 days is usually required to effect local customs clearance, dock handling and delivery. The consignee for all such shipments should be the Shipping and Receiving Officer, United States Naval Facility, London, England.

It is advisable to ship refrigerators, adaptable washing machines, kitchen utensils, tableware, linens, etc. However, it is recommended that items of furniture be kept to a minimum because of the very limited number of unfurnished houses and apartments available.

Most people bring too much with them. In such cases commercial storage facilities may have to be obtained, since there is practically no storage space in houses and apartments and no government storage facilities are available in the London area. If commercial storage is necessary, the government may finance it for the first six months if sufficient justification is furnished. After 6 months any additional storage charges must be paid by you.

Once you have arrived in the United Kingdom it will *not* be necessary to contact the Shipping and Receiving Officer regarding your household goods until you are notified that they are on their way overseas. You will be advised of the approximate date on which you can expect to have them released to you and what steps will be necessary for you to take.

In the United Kingdom, as in the States, the owners of household goods have no vested right in the packing boxes and materials furnished by the government to move their effects. In practice, usually, crating lumber and other nonre-us-

'I'm Calling from the South Pole'

One of the greatest morale boosters for some 250 men on board the icebreaker USS *Glacier* (AGB 4) now on duty in the Antarctic is a $2500-ham radio set.

And probably the most popular men aboard are the two who volunteered to operate the gear during their off-duty hours, George E. Dixon, SK1, and Robert J. Fuller, RM2.

The volunteer operators explain: "All we do is contact a ham radio operator back in the States and have him place the call through the local telephone company. The men speak to their families via radio-telephone."

Glacier's radio station, designated KC4USG, operates on the 15- and 20- millimeter bands and is capable of receiving signals from almost anywhere in the world.

But the idea of using radio from the South Pole is not new.

Sir Douglas Mawson, who led an Australian Antarctic expedition which wintered over on Cape Dennison in 1911-1912, was the first to use wireless communication to the outside world. Of necessity, this was done by relay, but with refinements of modern radio, relays are no longer needed for ham bands.

Last year, during Operation Deep Freeze III, the use of radio to contact families at home was put to good practice. Of the 18 men at the Amundsen-Scott IGY South Pole station, three had families who lived outside the United States. And all three were able to make direct contact just as easily as those in the States.

Paul Blum of W2KCR in North Syracuse, N. Y., just as he did during other Deep Freeze operations, met the base on schedule each night to take "Hamgrams." The service was coordinated through an organization called Ham Operators of Greater Syracuse. By this method telegrams were sent to families, who replied without expense to the men. In one five-month period, more than 150 messages were sent and received.

Ted Young of WCCO in Minneapolis, Minn., took significant clippings from the newspapers and read them to the base. They were tape recorded at the South Pole where they served as news broadcasts.

Others who were always "up" were Jules Maddey and his brother Jose on K2KGJ and K2KGH in Clark, N. Y. W6WYB of Los Banos, Calif, was another who spent many hours arranging contacts for stations close to the home of one of the men stationed in the Deep south.

"There is no greater satisfaction," said one of the South Pole ham operators, "than watching the ear-to-ear grin appear as each sailor says, 'Hi honey, I'm calling from the South Pole'."

able materials may be left with the owner if he desires. However, it is emphasized that re-usable boxes must be returned.

Mail—There is a U.S. Navy Post Office located in the CINCNELM Headquarters Building, 7 N. Audley Street. The services of this office are available to all members of the armed forces on active duty and their dependents.

Weight and size limitations: Parcels may not exceed 70 pounds in weight and/or 100 inches length and girth combined.

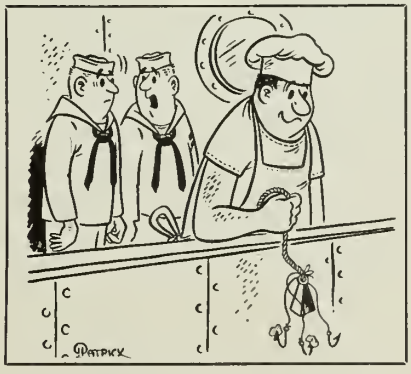
To date all parcels received through U.S. Mails are permitted to enter the area duty free. The contents of all parcels must be for your or your dependents' personal use.

The official postal address for personnel attached to activities stationed in London is Navy 100, with a box number to denote the activity you are attached to. Example:

W. J. Sykes, YN1, USN or
Mrs. W. J. Sykes
c/o W. J. Sykes, YN1, USN
Box #.....
U.S. Navy #100
c/o Fleet Post Office
New York, New York

For initial onward routing of mail, include the name of the activity to which you are assigned, i.e. CINCNELM Staff, NAVFAC, MAAG-UK, etc.

Pets—Taking pets with you is not recommended. The quarantine period for dogs and cats is currently six months. Specific inquiry should be made in advance of the shipment of any other type of pet. If, however, you must bring a pet, limited accommodations for them are available on MSTS ships from April to November. Cost of shipping is $50 each (cost assumed by owner). It is your responsibility to



"Bet I know what we're having for dinner tonight."

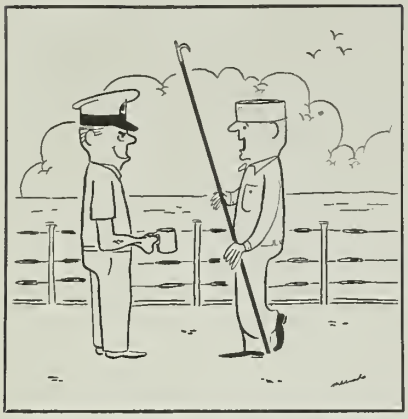
make arrangements for shipment overseas and transportation from Southampton to London. This should be done well in advance of the shipping date.

Automobile Insurance — Rates, of course, vary according to car model, year, and location garaged. Approximate sample rates for full coverage (£ 25 deductible) are from $160 to $180. (Proportionate rebates are made if no accidents occur during coverage.)

Automobile Club — Representatives are available in the headquarters building on certain days to give information on their clubs, licenses, car registration and insurance.

Automobile — No restrictions are imposed on the importation of privately owned automobiles if they are in good mechanical order and safe operational condition. As shipment and delivery require several weeks, there is ample time for personnel to comply with the COMNAVACTS regulations and British Customs regulations after reporting to the area for duty. Cars arriving on your ship can be picked up at Southampton about two days after reporting. In the meantime, arrangements can be made for license

F. Mercado, SKSN, USN



"Hey Chief, who's my chow relief for the mail buoy watch?"

and insurance. Vehicles may be entered free of duty and purchase tax if a certificate is executed which binds the owner to export the car at a later date. Sale to another United States military individual who can execute the same type of certificate is permissible. Authority to sell an automobile in the United Kingdom must be obtained from COMNAVACTS.

By a change in British regulations, military personnel no longer have to obtain a British drivers' license, but can drive on a valid United States license.

Dependents are also authorized this privilege for one year from last entry into the United Kingdom. After one year, dependents will have to obtain a British drivers' license.

Large American automobiles are difficult to handle in England owing to parking conditions and the considerable number of narrow streets. Difficulty will also be experienced in obtaining garage space, either in public garages or in private homes, and when available will cost from $4 to $6 weekly. There is usually parking space in front of a residence; however, on some streets parking lights must be left on during the night. Under a recent agreement with the British government, gasoline (petrol) can be purchased at Navy Exchange gas stations at $.25 a gallon to drive to and from work. Gasoline costs approximately $.70 per imperial gallon which equals $.54 for a U.S. gallon.

In spite of the inconvenience inherent in operating American automobiles, you may want to bring them because of the advantages from the standpoint of sightseeing and assisting in local transportation. Official transportation is very limited. If you import your car, the supply officer will advise you by letter of the arrival of your automobile and the procedure for collecting it.

Cars can be bought for dollars from British dealers through the Navy Exchange with delivery from one week to a month. Such cars are purchased without paying the British tax but must be exported or sold to another entitled person at the end of your tour. American cars can be purchased at a slight discount and free of federal tax from local representatives. Time of delivery in England varies from six weeks to three months. Only one duty-free or tax-free automobile may be imported, but a second (British) vehicle may be purchased where bona fide need occurs and at least one vehicle must be exported on termination of duty.

Appliances—Electrical household appliances are available on the local market. Radios, electric irons, washing machines, electric ranges, refrigerators, vacuum cleaners, kitchen appliances, etc., of American manufacture for use on 110 volts A.C., can be used in England provided transformers of sufficient capacity are used. Transformers of various capacities from 150-to-3000-watt range in price from $5 to $40. British light bulbs to fit American lamps are available at a moderate price. Thus, American lamps do not require new sockets nor do they require re-wiring. American appliances operated by a motor, such as refrigerators, ringer-type washing machines, vacuum cleaners, mixers, etc., need no adjustment to operate from a suitable transformer. Electric clocks, however, will lose time because of the 50-cycle current. Automatic washing machines that have to have equal pressure on the hot and cold inlets will not operate in the London area owing to the difference in pressures on the hot water line (about 15 lbs. per square inch) and the cold water line (60 lbs. per square inch). The 50-cycle electric current will also affect your set washing cycle. Semi-automatic machines or ringer-type are considered more desirable. Phonographs must be adapted to 50-cycle current to turn at correct speeds (see your local dealer for information), and should be modified before departure.

If you want to bring American gas appliances with you, it is recommended that you check with the manufacturer to determine if such appliances will operate on the lower heat content of the gas supplied in London.

Refrigerators (electric or gas) are usually found in the more expensive apartments or houses but are much smaller than those of American manufacture. You should strongly consider shipping your refrigerator if you want the storage capacity to which you are accustomed at home.

Electric heaters are usually desirable to supplement the heating system or fireplaces provided in English apartments and houses. Your local public utility company will advise you as to their availability for purchase to operate on British voltage, or they can be purchased there. Often it is possible to obtain heaters from personnel under orders to return to the United States. Many American people use kerosene (parafine) heaters in England. These are available on the local market.

Electric irons which are wired for British current may be purchased locally at reasonable price and are considered excellent. However, American irons will work with a transformer.

Do not bring American television sets to England as they are not adapted to British current and broadcasting stations.

The Navy Exchange has a special order section where you can place an order for any appliance. Waiting

time is approximately two to three months.

Medical and Dental—Dependents in London may obtain medical care at the dispensary located at 36 Portman Square, London, W.1. This is an out-patient service and limited as to treatment that can be given. There is no American in-patient service. The nearest American hospital is at Ruislip, about 15 miles from London and operated by the U.S. Air Force. However, some prefer to obtain the services of a private British physician who will also make home calls. This is at your own expense, unless the treatment is determined to come under the provisions of the Dependents Medical Care Program. To newcomers, it is strongly advised to establish a physician close to your residence as the Navy medical officer does not make routine calls to private homes. A list of private physicians can be obtained from the Naval Dispensary or the Post Office in each locality.

Immunizations—Your dependents should arrange to obtain an International Certificate of Vaccination in addition to the U.S. Navy Immunization Record before leaving the United States. The International Certificate of Vaccination may be obtained from the U.S. Public Health Service.

The routine immunization requirements for all military personnel and civilians traveling under Navy orders outside the continental limits of the United States, regardless of destination are: Smallpox, tetanus, typhoid, and diphtheria if Shick Test is positive.

If traveling other than by direct route to the United Kingdom, special immunization may be necessary. Information may be obtained from the Bureau of Medicine and Surgery, Washington 25, D.C.

Dental Service—The Dental De-

A Summary of Defense Reorganization Act by the Chief of Naval Operations

The Defense Reorganization Act of 1958, which is expected to have a decided influence upon America's future military effectiveness, is a law with which everyone in the Navy will become familiar.

Enacted in August 1958, it is now being implemented. Since it clearly establishes the Department of Defense as a composite organization under the control of the Secretary of Defense, it puts an end to any previous interpretation of the Department of Defense as a "federation" of autonomous military services. Under it, the direction, authority and control of the Secretary of Defense are superior in all respects to the powers vested in any other official in the defense establishment.

Besides determining policy, the Secretary of Defense will become involved in operations. The principal components of the Secretary's organization will be the Office of the Secretary of Defense; the Departments of the Army, Navy and Air Force; the Joint Chiefs of Staff; and the combatant command structure made up of unified and specified commands designed to perform military missions. The Secretary's office may have executive as well as staff functions.

There will be two lines of control within the defense establishment—a line of operational command from the President and Secretary of Defense directly to the combatant forces, and a line of administration and support through the military departments.

The Joint Chiefs of Staff system will be retained. However, the Joint Chiefs will be drawn into operations and placed in a direct relationship to the command line running from the President and Secretary of Defense to the combatant commands. The Joint Staff, which serves under the Joint Chiefs, has been enlarged so that the staff can handle duties previously taken care of by the Executive Agencies and the committees of the Joint Staff.

The Reorganization Act does not change the roles and missions of the services already established by law. The Department of the Navy —specifically including naval aviation and the Marine Corps—and the other armed forces departments, continue to be separate organizations under their own secretaries, subordinate to the Secretary of Defense.

The Act specifies that the military services will not be merged. Although various functions may be administratively transferred, reassigned, abolished or consolidated, Congress still retains its prerogatives on matters already legislated and its constitutional duty to "provide for the common defense."

Short of matters already legislated by Congress, the Executive Branch retains its freedom to realign functions. In case of actual or threatened hostilities, the President has complete freedom to transfer functions, except that he cannot permanently abolish them.

The foregoing information is a summary of a report made by the Chief of Naval Operations, Admiral Arleigh Burke, USN. The report states that the Act de-emphasizes the military command authority of the Chief of Naval Operations. As a member of the Joint Chiefs of Staff he will participate in the command function of the Secretary of Defense. But, as CNO, he will not exercise command of the naval forces assigned to the combatant commands.

In whatever context the Secretary of the Navy may determine, the CNO will supervise the naval forces not assigned to the combatant commands. In addition, CNO will supervise other members and organizations of the Navy and Marine Corps, as determined by the Secretary of the Navy. This could extend to activities and agencies other than those usually classed as "operating forces"—such as components of the shore establishment, for instance. In view of the Navy Department's administrative responsibilities in regard to support, training and the like, the CNO's duties in the future will probably be more along these lines than they were in the past.

Besides the changes that the Reorganization Act makes in the workings of the Defense Department, the law also puts increased emphasis on research and development aimed at the creation of new and better weapons.

partment of the U.S. Naval Dispensary, London, provides routine operative and surgical dental treatment to dependents within its capabilities. Prosthetic treatment is available but very limited. It can be obtained from qualified civilian dentists at your own expense.

The dental staff is small, and active duty military personnel have priority. It is strongly recommended that dependents have their dental treatment accomplished, especially prosthetics, before their arrival in London.

Housing—Housing is the most important problem to a newcomer. Unfurnished flats or houses are extremely difficult to obtain and may require a long lease, i.e., three years or longer. The average furnished, two- or three-bedroom flat in the metropolitan London area varies in price from $100 per month up.

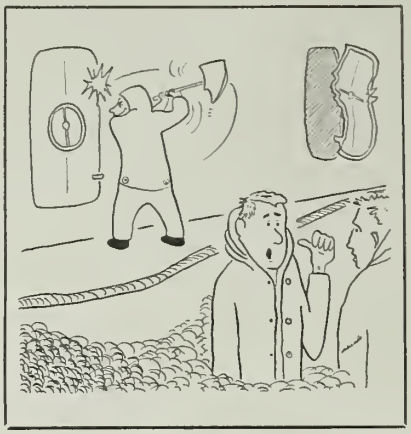
Centrally heated homes are difficult to obtain and the definition of "central heat" is different from that in the United States, i.e., one radiator in a home is considered as central heat. The majority are heated by gas fires, fireplaces, or electric heaters. Utilities are expensive and are additional to the rent.

Rents are usually quoted in guineas per week, usually paid monthly in advance. You may be required to pay half the cost of the agreement of lease and half the cost of the inventory of equipment and furniture contained in the premises.

Deposits against damages on departure are usually required. Dilapidation charges are in some cases very high and note should be taken of the exact condition of furniture and fixtures at the time of taking over any premises. Charges for taking an inventory are approximately $12 per day. The inventory of the average home is completed in one day. Alternatively, dilapidation insurance is obtainable, which includes a "marching in" and "marching out" inventory, for the sum of $28.40; this covers $280.00 insurance for 12 months. The cost of the tenant's share of a lease agreement should not exceed $7.00. Each party signs an original lease, and to this, to make it official, must be affixed stamp duty. The charge for this is approximately $2.10.

It is suggested that you consult the Naval Facility Legal Officer.

F. Mercado, SKSN, USN



"You tell him the fire's over—I haven't got the heart."

Leases in the United Kingdom are quite different from the normal lease agreement in the United States. Be sure that a clause is inserted into the lease giving you the right to notify the landlord upon change of station orders and to terminate your lease on 30 days' notice.

It is not advisable to sign any agreement or pay any money in rent or deposit (except some small sum to hold the premises during negotiation) until the Legal Officer has been consulted.

Navy Exchange — A Navy Exchange is maintained within the CINCNELM Headquarters building. Facilities are for the use of members of the armed forces, their dependents and such other persons as are authorized by the Navy Department and local area directives.

The Navy Exchange stocks personal needs, household supplies, gifts, and sundry items desired by Americans away from home. A "Special Order" division is maintained to enable authorized patrons to make certain purchases (including major household appliances) at a saving in the British, European and American markets.

The Commissary Division is maintained for the convenience of authorized patrons and their dependents. A line of groceries, meats, vegetables and frozen foods similar to that of an American supermarket is carried in stock. A complete line of baby food is stocked.

Other services provided by the Navy Exchange are as follows: Barber shop, laundry, dry cleaning, shoe repair, tailor shop, photo finishing and shoeshine stand.

Laundry and dry cleaning collection from homes is usually difficult to arrange. A central collection service is maintained by the Navy Exchange, which has a contract with a British firm for laundry and dry cleaning. Costs of laundry and dry cleaning are generally higher than in metropolitan areas in the U. S.

Churches—The Established Church plays an important part in the national life of the people. There are 860 Church of England churches in the London area, 500 churches of other Protestant denominations, 160 Roman Catholic churches and 100 synagogues.

The Chaplain's Office in Grosvenor Square will be pleased to give information or assistance to personnel in finding churches near their residences. There are many famous churches and preachers to be visited.

The U.S. Navy Protestant Chaplain conducts services for Protestant personnel in the King's Weigh House Church, Duke Street, just off Grosvenor Square, at 1215 every Sunday. There is also a Navy Sunday School and Bible Class for children and adults at 1100 each Sunday. This is held at the American School, 13 Grosvenor Square.

A nursery for infants and small children, under the supervision of a qualified nurse, is conducted during the Sunday Worship Service and is located at the Chapel building.

Jewish personnel are welcomed at the local synagogues, and services are held by the Air Force Jewish Chaplain at the Hillel Foundation House, 1, Endsleigh Street.

Education and Welfare—Help and advice may be obtained here regarding USAFI courses, University of Maryland Extension courses and details of methods of enrollment in the University of London, Royal College of Music, Royal College of Dramatic Art, or the numerous and valuable educational evening courses run by the London County Council Educational Department.

There is a small library attached to the Education Office. The U.S. Embassy has a very fine reference library as well as an excellent Record Lending Library.

Schools—There are two parallel

systems of education in England, State System and Private Schools. The State System of education is not normally suitable for the student who does not reside permanently in Great Britain. The Private School System consists of kindergarten, pre-preparatory schools, preparatory schools and senior schools. The usual age at which children start school is 5.

The so-called Public Schools are in fact private Prep schools. For admission, applicants must pass the Common Entrance Examination. It is necessary in most cases to have the child's name on the list for entry several years in advance.

In addition to Public Schools there are a number of other schools which are run on Public School lines but do not demand an entrance examination. To these schools go numbers of English boys who have not entered the Public Schools; also at these schools students from countries abroad are usually to be found. There is not usually a waiting list and it is fairly easy to enroll children.

For girls, the Private School System is run on very much the same lines as that for boys. Girls also have Public Schools where an entrance examination is required as well as the name on the entry list.

In England the Boarding School System is used far more extensively than in any other country, and a large number of children, both boys and girls, are educated from an early age at Boarding Schools. There are a large number of Day Schools where the education is the same as that to be found in Boarding Schools.

There is a wide range of Roman Catholic Schools and Convents, both Boarding and Day. The same rules apply for entrance into the Roman Catholic Public Schools and in most of them it is difficult to obtain a place unless the boy has been entered some years previously. There are other Private Schools which provide a sound education and are not so difficult to enter. For girls there is a considerably wide range of choice among a number of Roman Catholic Convents throughout the country.

There are also Finishing Schools, Domestic Economy and Secretarial Colleges. These schools are either Day Schools or Boarding Schools.

There are school agents and consultants in Great Britain who furnish information free of charge on Day and Boarding Schools throughout the country.

U.S.-Sponsored Schools — The United States Air Force-sponsored schools are Bushey Park School, Teddington, Middlesex (11 miles from Grosvenor Square), Eastcote School, near Pinner, Middlesex (12½ miles from Grosvenor Square) and Prince's Gate School, 52-53 Prince's Gate (Exhibition Road), Kensington, London, S.W. 7 (1 mile from Grosvenor Square). The School at Bushey Park has grades 1 through 12. This school has dormitory facilities for students in the 9th grade and higher who are unable to commute to school. Eastcote has grades 1 through 6 as does the new school at Prince's Gate. Free bus service is provided for all students residing in London and its immediate environs from designated pick-up points and return.

Those with children of school age (in England a child must attend school from his fifth birthday) should contact the Naval Facility Supply Office (Mrs. Peake), telephone GROsvenor 9000, ext. 2896. This office will furnish general advice concerning the U. S.-sponsored schools and the British schools, but not particular advice as to the desirability or character of any particular school. It will also provide necessary information and forms leading toward payment by the Navy of its allowable share of any school bill. It is recommended that this office be contacted before a child is enrolled in school.

Transportation—Public transportation throughout the City of London is inexpensive and excellent. Motor buses and double-decker buses are frequent and available to almost any point in London until midnight. There is also an effective underground (subway) system to almost any point in the London area until midnight. Taxis are available on a 24-hour basis, at rates comparable to those in any major city in the U.S. Car-hire service is also available on a 24-hour basis, either with chauffeur services or on a drive-yourself system. Train services from London to other points in the United Kingdom are frequent (until midnight) and inexpensive.

". . . And I say you do have a superiority complex!"

Recreation—There are many opportunities for recreation in London and the surrounding area. These include a variety of legitimate theaters, movies and concerts. There are many interesting and historical places to visit. Sight-seeing trips are available through commercial companies at reasonable rates.

London has many museums, art galleries, and numerous antique shops and markets throughout the city.

Sports facilities include squash courts, swimming pools (both indoor and open air), tennis courts, ice rinks and golf courses.

Organized dances and social functions are provided by the Navy at periodic intervals.

Visits to various parts of England, Scotland and Ireland as well as to the continent during leave periods are always interesting as well as educational; information on travel by land, sea and air is readily available.

The American Embassy operates a cafeteria and dining room at 3 Grosvenor Square which serves luncheons and dinners Monday through Friday at an average cost of seven to 10 shillings ($1.00-$1.40). Sterling must be used.

The U. S. Air Force has an Officers' Club, the Columbia Club, which is located at 95/99 Lancaster Gate, W.2. The club serves breakfast, lunch and dinner each day.

The U. S. Air Force also has an Enlisted Men's Club, the Douglas House. This club serves breakfast, lunch and dinner each day of the week and has a bar. Overnight accommodation for enlisted personnel and their dependents are available.

Taking February Exams? Here's How Ratings Made Out Last Time

As a result of the August service-wide examinations for advancement in rating, advancements ranged from less than 10 per cent in some ratings to 100 per cent in others.

Again this month, the same opportunity exists.

This can mean several things to you who are qualified to take the exam. If your rating is in the 100 per cent class, pass the examination and you will probably receive your advancement. If your rating is in the less than 100 per cent category, you must earn a higher score than your co-workers before you get the nod. And, if your rating is in the less than 10 per cent group, it might be well to consider changing your rating.

In any event, it is suggested that you take a good look at BuPers Inst. 1440.18B and 1440.5B for the requirements. It certainly can't hurt, and you might advance faster.

As a result of the August 1958 examinations, the following number of personnel were advanced in each rating: (Emergency service ratings and selective emergency service ratings not listed below are included with, and computed with, the corresponding general service rating.)

Rating	E-4 Passed	E-4 Advanced	E-5 Passed	E-5 Advanced	E-6 Passed	E-6 Advanced
Group I Deck						
BM	1688	325	1345	40	1485	2
QM	286	286	128	128	127	2
RD	613	613	450	450	179	179
SM	285	285	174	174	107	107
SO	306	306	225	225	117	117
SOO	7	7	—	—	—	—
Group II Ordnance						
FT	—	—	445	330	318	2
FTA	620	318	—	—	—	—
FTE	7	7	—	—	—	—
FTG	4	4	—	—	—	—
FTL	93	93	—	—	—	—
FTM	437	204	—	—	—	—
FTU	24	24	—	—	—	—
GM	1273	653	722	88	927	2
GS	46	46	34	34	57	5
MN	90	50	77	8	54	1
NW	36	36	15	15	13	13
TM	209	209	181	181	246	2
Group III Electronics						
ET	—	—	499	499	384	130
ETN	205	205	—	—	—	—
ETR	258	258	—	—	—	—
ETS	42	42	—	—	—	—
Group IV Precision Equipment						
IM	46	35	41	18	21	1
OM	15	15	11	11	13	1
Group V Administ. and Clerical						
CT	346	346	342	342	132	100
CS	1109	300	1103	34	1275	2
DK	275	205	153	100	172	2
JO	66	66	20	20	15	10
MA	133	133	77	65	85	6
PN	1880	670	392	250	347	2
RM	985	985	659	659	305	286
SH	1130	300	567	15	364	2
SK	1120	1120	566	300	486	2
TE(RM)	9	9	56	56	65	50
TE(YN)	—	—	34	21	31	0
YN	1611	1480	750	500	762	2
Group VI Misc.						
DM	118	80	56	56	14	8
LI	112	45	43	4	39	1
MU	116	116	90	90	47	10

Rating	E-4 Passed	E-4 Advanced	E-5 Passed	E-5 Advanced	E-6 Passed	E-6 Advanced
Group VII Engineering and Hull						
BR	—	—	—	—	0	0
BT	1550	1550	732	732	423	77
DC	390	365	327	115	309	2
EM	1014	1014	913	913	438	100
EN	1210	1210	972	465	955	4
FP	587	375	277	115	190	2
IC	324	324	248	248	115	115
ME	449	415	408	190	329	2
ML	38	22	20	9	13	1
MM	1689	1689	1143	1143	480	175
MR	378	330	217	217	100	70
PM	30	30	12	12	6	1
Group VIII Construction						
BU	268	200	126	126	69	20
CE	113	113	77	77	34	15
CM	196	80	105	30	65	2
CD	357	100	172	15	159	2
SV	48	24	10	10	5	1
SW	75	50	52	25	32	3
UT	94	94	54	54	31	18
Group IX Aviation						
AB	—	—	321	100	249	2
ABG	328	62	—	—	—	—
ABU	770	263	—	—	—	—
AC	—	—	—	—	132	2
ACR	30	30	26	26	—	—
ACT	141	120	151	80	—	—
ACW	133	120	104	104	—	—
AD	—	—	1913	365	1387	2
ADJ	1065	480	—	—	—	—
ADR	1287	940	—	—	—	—
AE	—	—	767	767	240	100
AEI	141	141	—	—	—	—
AEM	387	387	—	—	—	—
AG	173	173	133	133	75	45
AK	921	300	317	130	216	2
AM	—	—	850	850	361	15
AMH	473	473	—	—	—	—
AMS	724	724	—	—	—	—
AO	702	468	418	132	307	2
AQ	—	—	97	97	71	2
AQB	37	37	—	—	—	—
AQF	94	94	—	—	—	—
AT	—	—	839	839	519	200
ATN	388	388	—	—	—	—
ATR	256	256	—	—	—	—
ATS	35	35	—	—	—	—
GF	54	54	49	49	24	2
PH	—	—	181	135	133	2

Rating	Passed E-4	Advanced E-4	Passed E-5	Advanced E-5	Passed E-6	Advanced E-6
PHA	131	50	—	—	—	—
PHG	347	225	—	—	—	—
PR	249	130	139	82	69	2
PT	6	6	1	1	1	1
TD	—	—	103	95	105	8
TDI	75	75	—	—	—	—
TDR	31	31	—	—	—	—
Group X Medical						
HM	2199	1212	1290	300	1277	2
Group XI Dental						
DT	441	224	195	70	156	2
Group XII Steward						
SD	1564	42	950	28	709	2

For advance planning purposes, the Bureau of Naval Personnel has estimated the advancement opportunities for those who are taking the February examinations. These estimates are based on the percentage who normallly pass the examination and on the number of expected openings. Advancements to pay grades E-8 and E-9, and proficiency pay, have not been estimated.

PO2s are reminded that they now need 24 months in grade, instead of only 12 months, before they can be advanced to PO1.

The following rates are those in which the greatest Navy-wide shortages exist, and which therefore present the best opportunities for advancements. Of those who pass the examinations for these rates, it is estimated that 70-100 per cent may expect advancement:

Pay Grade E-4:
QM, RD, SM, SO, GS, NW, TM, ET, IM, OM, CT, DK, JO, MA, RM, SK, YN, MU, BT, EM, EN, IC, MM, MR, PM, BU, CE, UT, AC, AE, AG, AM, AQ, AT, GF, PT, and TD.

Pay Grade E-5:
QM, RD, SM, SO, GS, NW, ET, OM, CT, JO, MA, RM, TE(RM), DM, MU, BT, DC, EM, IC, MM, MR, PM, BU, CE, UT, AC, AE, AG, AM, AQ, AT, GF, PT, and TD.

Pay Grade E-6:
RD, SM, SO, NW, CT, JO, RM, TE(RM), BR, IC, MM, AG, AT, and PT.

Pay Grade E-7:
RD, SM, SO, NW, JO, MA, RM, TE(RM), DM, MU, BR, EM, IC, MM, MR, CE, SV, UT, AE, and PT.

Opportunities are good for the following rates. It is estimated that 35-70 per cent of those who pass the examinations will be advanced:

Pay Grade E-4:
FT, GM, MN, PN, DM, LI, DC, FP, ME, ML, CM, SV, SW, AD, AO, PH, PR, HM, and DT.

Pay Grade E-5:
FT, TM, IM, DK, PN, SK, YN, EN, FP, ME, ML, SV, SW, AB, AK, AO, PH, PR, and DT.

Pay Grade E-6:
ET, DM, EM, PM, CE, SV, UT, and AE.

Pay Grade E-7:
GS, TM, ET, EN, BU, AB, AG, and AT.

Fair advancement opportunities exist in the following ratings. An estimated 10-35 per cent of those who pass should be advanced.

Pay Grade E-4:
BM, CS, SH, EO, AB, and AK.

Pay Grade E-5:
CM, AD, and HM.

Pay Grade E-6:
GS, OM, MA, MU, BT, MR, and BU.

Pay Grade E-7:
BM, GM, MN, CS, DK, PN, SK, TE(YN), YN, LI, BT, DC, FP, ME, PM, CM, EO, SW, AC, AK, AM, and TD.

The Navy has an excess of personnel in the following ratings. While none of these ratings will be closed, it is estimated that less than 10 per cent of successful examinees will be advanced.

Pay Grade E-4:
SD.

Pay Grade E-5:
BM, GM, MN, CS, SH, LI, EO, and SD.

Pay Grade E-6:
BM, QM, FT, GM, MN, TM, IM, CS, DK, PN, SH, SK, TE(YN), YN, LI, DC, EN, FP, ME, ML, CM, EO, SW, AB, AC, AD, AK, AM, AO, AQ, GF, PH, PR, TD, HM, DT, and SD.

Pay Grade E-7:
QM, FT, IM, OM, CT, SH, ML, AD, AO, AQ, GF, PH, PR, HM, DT, and SD.

That's the story of your chances for advancement.

Course Ready on Submarine Medicine and Radio Isotopes

Two new Medical Department correspondence courses are now available to Regular and Reserve officers and enlisted personnel.

Submarine Medicine Practice (NavPers 10707-A) includes discussions on personnel selection and assessment procedures, improvement of submarine habitability factors, solution of human engineering problems aboard submarines, submarine escape and rescue operations, and the medical aspects of other undersea operational problems. The course consists of six assignments evaluated at 18 points credit for purposes of Naval Reserve retirement and promotion.

Radioisotopes in Medicine (NavPers 10773) emphasizes practical clinical radioisotope techniques and directs attention to the potential applications of radioisotopes in medicine. The course consists of seven assignments evaluated at 21 points credit for purposes of Naval Reserve retirement and promotion.

Applications should be made on NavPers form 992 (Rev 10/54 or later) with appropriate change in the "To" line, forwarded via official channels to the Commanding Officer, U. S. Naval Medical School, National Naval Medical Center, Bethesda 14, Maryland (Attn: Correspondence Training Division).

More Appointments to Warrant Made from February Lists

Eleven first class and 13 chief petty officers have been issued temporary appointments to Warrant Officer, W-1.

These appointments are from an eligibility list established by a selection board convened in February 1958.

Regular Navy appointments were broken down into the following designators: Boatswain (7132), four; Surface Ordnance Technician (7232) one; Ordnance Control Technician (7242), one; Machinist (7432), seven; Electrician (7542), four; Communications Technician (7642), one; Ship Repair Technician (7742), one; Supply Clerk (7982), five.

Memorial Stadium Under Way, Completion Date This Fall

The Navy-Marine Corps Memorial Stadium at Annapolis, Md., is beginning to take shape. Construction, which started in March 1957, is expected to be completed in time for Navy's season opener in 1959.

When the stadium is completed, it will be a culmination of a project that had its beginning back in 1939. But the original construction plans were delayed by World War II.

In April last year a fund drive was opened to raise the required money. Donations came from units of the Fleet and shore activities, from individual Navymen, Marines and civilian friends. The Naval Academy Athletic Association donated the 101-acre site in West Annapolis and a million dollars.

By early September 1958 the $3,000,000-goal for the Memorial Stadium had been passed.

Tips for Navymen with Weight Problems when Moving Household Effects

One of the biggest jobs involved in a permanent change of station is movement of a Navyman's household effects to his new place of duty. The Navy tries to ease his problems by authorizing a commercial moving company to pack his goods and ship them to his next duty station.

However, there is a limit to the amount any one person may ship. If the weight is over this limit, your pay is checked for the difference.

Only a small percentage of all shipments results in additional charges to the owner. Nevertheless, the possibility always exists. The problem grows increasingly acute because of the trend toward heavier household appliances. Therefore, every shipper has a personal interest in taking the ounce of prevention that may save dollars of cure.

To provide the necessary ounce of prevention, the Household Goods Division of the Bureau of Supplies and Accounts has compiled some hints on how to avoid checkages. These are broken down into the various stages of an owner's move:

• ***Before Making Shipment***—Sort out and dispose of all surplus goods. If you plan your move as if you were paying the bill, you will do both the government and yourself a service. Old magazines are heavy and cost just as much to move as expensive china.

• ***When Making Application***—If your estimate of weight gives you any cause for concern, discuss this point with the Supply Department. If the goods are to be packed and crated, ask that a *net* weight be determined for your goods prior to packing and crating. (You will usually get a better break than if the percentage allowance for packing materials is applied after shipment.) If the goods are to go by moving van, ask that the moving company make a personal visit and give you a written estimate, if possible. Also, be sure to tell the supply people about any professional books you may have—their weight is not charged to your allowance if they are properly segregated prior to shipment.

• ***When Goods Are Picked Up***—Insist on getting a legible and complete copy of the inventory of your goods and the government Bill of Lading. Add these to your "moving file" and keep them. Even if you don't need these papers for your present move, they may come in handy to verify items shipped in the future.

• ***When Your Goods Are Delivered.*** If your goods are delivered by moving van, check the government bill of lading the driver has, to see if the weight is generally in line with the estimate. If not, and you feel an error has been made that will result in a checkage, call the nearest household goods shipping office at once and ask them to have the shipment reweighed. Keep in mind that you must do this only BEFORE your goods are unloaded and then only if you are convinced that the weight shown is out of line.

• ***After Goods Are Delivered***—If you think you may receive a checkage, ask the Navy Regional Accounts Office, Washington, D.C., if you have actually exceeded your authorized allowance. If so, and you think erroneous weights are involved, write a letter with the facts to NRAO. Explain all factors including references to previous weights in your moving file and weight of items added since your last move. Remember, the sooner you start action, the more chance NRAO has to obtain weight correction while the facts are still fresh in the minds of those involved.

• ***If A Checkage Is Received***—If you have evidence that indicates you are being charged for overweight you don't have, write NRAO and explain why you think weights have been incorrectly computed. Also, request that the checkage be held in abeyance pending an investigation of your complaint. Even though NRAO must issue the checkage as soon as excess weights are noted, they are willing to consider any substantial evidence that might be used in obtaining weight and billing corrections from the carriers.

F. Mercado, SKSN, USN

"Well, I can see your mind is not on your work."

Latest List of Motion Pictures Available for Distribution To Ships and Overseas Bases

The latest list of 16-mm. feature movies available from the Navy Motion Picture Service, Bldg. 311, Naval Base, Brooklyn 1, N. Y., is published here for the convenience of ships and overseas bases. The title of each picture is followed by the program number.

Those in color are designated by (C) and those in wide-screen processes by (WS). Distribution began in December.

These films are leased from the movie industry and distributed free to ships and most overseas activities under the Fleet Motion Picture Plan.

Seven Hills of Rome (1211)(C)(WS): Musical; Mario Lanza, Marisa Allasio.

Raw Wind in Eden (1212)(C)(WS): Drama; Esther Williams, Jeff Chandler.

The Law and Jake Wade (1213)(C)(WS): Western; Robert Taylor, Richard Widmark.

Thundering Jets (1214)(WS): Melodrama; Rex Reason, Dick Foran.

Space Master X7 (1215)(WS): Melodrama; Bill Williams, Lyn Thomas.

Indiscreet (1216)(C): Comedy; Cary Grant, Ingrid Bergman.

King Creole (1217): Melodrama; Elvis Presley, Carolyn Jones.

The Whole Truth (1218): Drama Stewart Granger, Donna Reed.

The Vikings (1219)(C)(WS): Drama; Kirk Douglas, Tony Curtis.

Naked Earth (1220)(WS): Drama; Richard Todd, Juliette Greco.

Sierra Baron (1221)(C)(WS): Western; Brian Keith, Rick Jason.

The Lone Ranger and the Lost City of Gold (1222): Western; Clayton Moore, Jay Silverheels.

The Badlanders (1223)(C)(WS): Western; Alan Ladd, Ernest Borgnine.

Procedures Set for Selecting Chief Petty Officers for Retention Beyond 20 Years

The future is considerably brighter for some competent PO1s who have been waiting for advancement to CPO. From now on, 20-year chiefs in 42 crowded rates will be selected to remain on active duty based on past and present performance.

BuPers Inst. 1133.12A provides that chief petty officers with more than 20 years' service in certain ratings will no longer be able to reenlist, or extend their present enlistment or active duty contracts without approval of the Chief of Naval Personnel.

The affected CPO ratings are: BM, QM, MN, GM, FT, ET, IM, OM, TE(YN), CT, YN, PN, SK, DK, CS, SH, LI, MM, MR, BT, SF(ME & FP), DC, PM, ML, CO(CD), CM, SW, AD, AL, GF, AO, AQ, AC, AB, AM, PR, TD, AK, PH, HM, DT, and SD.

All personnel, regardless of rate or rating, whose obligated service ends before, but near, the completion of 20 years' service will be permitted to reenlist or extend for two, three, four or six years, provided their contract does not extend beyond 22 years' service. They may also extend in yearly increments up to four years provided again that they stay below the 22-year mark.

For those who are not in the ratings listed above, but who will have completed 20 or more years' active duty at the end of their present obligated service, commanding officers will make sure the personnel concerned meet all stated requirements and are fully qualified professionally and physically for sea duty before extending or reenlisting.

For those who are in the 42 ratings listed, requests to remain on active duty must reach the Bureau of Naval Personnel before 15 February immediately preceding the fiscal year in which their service obligation ends. If, for example, their obligated service expires between 1 Jul 1959 and 30 Jun 1960, a request must reach the Bureau before 15 Feb 1959. If their enlistment expires before 1 Jul 1959, however, they will be permitted to extend their enlistment for one year while their request is being processed.

CPOs will be picked for retention on active duty by a board of officers in the Bureau. The selection will be based on performance, qualifications, and the needs and best interests of the Navy. Men of outstanding performance may expect to be selected for continuation on active duty unless compelling reasons dictate otherwise.

When a CPO is granted approval to remain on active duty past 22 years, he must agree that if he requests and is transferred to the Fleet Reserve, he will remain on active duty as a Fleet Reservist until the expiration of his service contract.

This new instruction does not apply to men in the TAR program.

Conflicting instructions in the *BuPers Manual* and other Bureau directives are held in abeyance by BuPers Inst. 1133.12A. Detailed information may be found in that instruction on the subject.

F. Mercado, SKSN, USN

"You say your special sea detail is to open the Golden Gate Bridge?"

DIRECTIVES IN BRIEF

This listing is intended to serve only for general information and as an index of current Alnavs and NavActs as well as current BuPers Instructions, BuPers Notices, and SecNav Instructions that apply to most ships and stations. Many instructions and notices are not of general interest and hence will not be carried in this section. Since BuPers Notices are arranged according to their group number and have no consecutive number within the group, their date of issue is included also for identification purposes. Personnel interested in specific directives should consult Alnavs, NavActs, Instructions and Notices for complete details before taking action.

Alnavs apply to all Navy and Marine Corps commands: NavActs apply to all Navy commands; BuPers Instructions and Notices apply to all ships and stations.

The following directives cover a two-month period.

Alnavs

No. 43—Announced the convening of selection boards to recommend staff officers on active duty (except TARs) for temporary promotion to lieutenant commander and lieutenant.

No. 44—Announced approval by the President of a selection board which recommended male Marine Corps Reserve officers for temporary promotion to the grade of captain and women officers of the Regular Marine Corps for temporary promotion to the grade of lieutenant colonel.

No. 45—Cancels Alnav 23.

No. 46—In discussion of shipment of household goods, points out that shipment by air must be restricted.

No. 47—Announced approval by the President of selection board recommendations for temporary promotion of male USN and USNR line officers to the grade of lieutenant commander and permanent promotion of women USN officers to the grade of lieutenant commander.

No. 48—Announced approval by the Secretary of the Navy of the selection board that recommended Regular Marine Corps warrant officers for promotion to Chief Warrant Officer W-3 (Permanent); Chief Warrant Officer W-3 (Temporary) and Chief Warrant Officer W-2 (Permanent).

No. 49—Cautioned that great care in driving must be exercised during the holiday season.

No. 50—Stated that initial proficiency pay awards effected 16 Nov 1958 will remain effective until 15 Jan 1960 unless sooner revoked. Paragraph 7(A) of BuPers Inst. 1430.12 will govern all later proficiency pay awards.

No. 51—Extended seasons greetings from Secretary of the Navy.

No. 52—Concerned with details of payment of enlisted personnel transferred from permanent duty station to receiving station for discharge and who reenlist at the RecSta under continuous service provisions.

No. 53—Announced approval by the President of selection boards that recommended USN and USNR line and staff officers for promotion

to lieutenant (line); lieutenant commander Medical Corps, Supply Corps, Civil Engineer Corps, Dental Corps, Medical Service Corps and Nurse Corps; lieutenant Supply Corps, Engineer Corps, Medical Service Corps and Nurse Corps.

Instructions

No. 1133.12A—Revises instructions for reenlistment or voluntary retention on active duty of personnel who are approaching, completing or exceeding 20 years or more of active service.

No. 1210.6A—Discusses procedures necessary for changing designator codes for USN and USNR officers.

No. 1500.46—Restates the objectives of naval correspondence courses and directs attention to the proper use and conduct of these courses.

No. 1520.16B—Provides information concerning courses of instruction in atomic, biological and chemical warfare defense and passive defense.

No. 1900.2A, Sup 1—Supplements instructions for the preparation and distribution of DD Form 214 (Report of Transfer or Discharge).

No. 1520.70—Announces communications courses conducted by the U. S. Naval School, Communications, Newport, R. I.

No. 2340.1—Provides commands authorized to issue orders a list of approved abbreviated equivalents for certain phrases or sentences.

No. 1000.15 — Announces establishment of MIDPAC-WESTPAC Leadership Field Team.

No. 1088.4A — Reissues contents of BuPers Inst. 1088.4 (concerned with the two-telegram system to notify next of kin of death) with certain revisions.

No. 1300.15C—Prescribes length of overseas service for personnel permanently located ashore outside the United States.

No. 1306.58C — Describes procedures relative to the preparation of punch cards used in the assignment of enlisted personnel.

No. 1430.12 — Implements proficiency pay program. Includes methods for determining eligibility, information regarding examinations and requalifications, and conditions under which proficiency pay may be revoked.

No. 1560.10B—Sets forth the details of the operation of the Navy's Tuition Aid Program.

No. 1611.6B—Announces instructions and procedures to be used for field naval aviator evaluation boards.

Notices

No. 1050 (24 October)—Announced Change No. 1 to BuPers Inst. 1050.2B, which is concerned with authority for enlisted personnel of Philippine or Guamanian extraction to return to Guam or the Philippine Islands for reassignment or leave.

No. 1020 (28 October)—Summarized recent changes to *U. S. Navy Uniform Regulations.*

No. 1700 (28 October)—Announced fourth All-Navy comic cartoon contest.

No. 1085 (30 October)—Issued instructions for preparation of Enlistment Contract (NavPers 601-1 Rev. 2-58).

No. 1418 (30 October)—Announced that servicewide examinations for advancement in rating to pay grades E-4 through E-9 would be conducted in February.

No. 1000 (6 November)—Forwarded revised lists of programs and opportunities available to naval personnel.

No. 1520 (20 November)—Solicited applications from commissioned officers and midshipmen for Navy sponsorship in the December 1959 Rhodes Scholarship competition.

No. 1700 (5 December) — Announced the 1959 All-Navy photography contest and eighth Inter-Service photography contest.

No. 1710 (8 December)— Announced Change No. 1 to BuPers Inst. 1710.1E, which is concerned with All-Navy and Inter-Service sports championships.

"Cranch has some kind of notion that the chief is always jumping on him."

No. 1430 (10 December)—Discussed advancement opportunities for enlisted personnel.

No. 1120 (11 December)— Announced Change No. 2 to BuPers Inst. 1120.29, which is concerned with officer candidate school programs for enlisted personnel on active duty.

No. 1741 (23 December)— Announced the distribution of the *Armed Forces Life Insurance Handbook,* NavPers 15917.

No. 1050 (24 December)— Directed the use of the new Officer Leave Request and Authorization form NavPers 2644.

No. 1220 (24 December)—Made corrections to *Manual of Navy Enlisted Classifications,* NavPers 15105A.

No. 1430 (24 December) — Waived requirement for completion of certain Navy Training Courses.

No. 1430 (24 December)—Announced Change No. 1 to BuPers Inst. 1430.11 which is concerned with advancement to pay grades E-8 and E-9 of USN and USNR men on ACDU, including TARs.

Two More Correspondence Courses Off the Presses

Enlisted Correspondence Courses will be administered (with certain exceptions) by your local command instead of by the Correspondence Course Center.

If you are on active duty, your division officer will advise you whether the course for which you have applied is suitable to your rate and rating and to the training program you are following. If it is, he will see that your application (NavPers 231) is forwarded to the Correspondence Course Center, which will supply the course materials to your command for administration.

Two new Enlisted Correspondence Courses are now available:

Course	NavPers No.
Military Requirements for PO 1 & C	91207
*Utilities Man 3 & 2	91594-1

* May be retaken for repeat Naval Reserve credit.

DISCONTINUED COURSES

Course	NavPers No.
Navy Mail, Vol. 1	91401-2B
General Training Course for Petty Officers	91203-E
Utilities Man 3	91593-D
Utilities Man 2	91594

THAR SHE BLOWS!

NAVY HOUNDS HURRICANES

Hurricanes, like the poor (and the rich), we will always have with us. However, within recent years they have been causing less and less loss of life. Here is a report on the steps taken to harness one of Nature's violent manifestations.

A hurricane has been informally defined as too much weather all in one spot. It (or baguio, typhoon, cyclone *—they all mean the same—*tropical cyclone *is the general or scientific term) is the most destructive of all storms. For centuries, the skipper of almost any ship, no matter how large or seaworthy, has acted on the sound principle that he who sights and runs away will live to float another day. However, some Navymen do chase hurricanes.*

STORMS have played an important part in the history of sea warfare when, on the day of battle, the ships couldn't run away.

The Greeks (and a storm) won an important victory over the Persians when the storm broke up the Persian fleet off the promontory of Mount Athos in 492 B. C. Dirty weather, as well as Drake, helped defeat the Spanish Armada and then, after the battle, helped destroy what was left of the Spaniards off the coast of Ireland. The Japanese homeland was saved from invasion in 1281 by a "Divine Wind" which shattered a powerful Mongol fleet of Kublai Khan.

Another "divine wind" almost, but not quite, again saved Japan when in December 1944 elements of the U.S. Third Fleet, preparing for the attack on the Philippines, were struck by a typhoon.

Although most of the Fleet was able to escape severe damage, three destroyers, USS *Spence* (DD 512), *Monaghan* (DD 354) and *Hull* (DD 350) were lost and four light carriers, three escort carriers, five destroyers, two escort destroyers, one light cruiser and one Fleet oiler were damaged. A total of 146 airplanes were lost, including eight blown overboard.

THE POWER of the storm was indicated in Admiral Nimitz's report in which he said that the damage represented "a more crippling blow than might be expected in anything less than a major action."

Only those who have lived through such a storm can fully appreciate its strength. Nevertheless, the following remarks from survivors can give some indication:

"At about 1130," reported LCDR James A. Marks, commanding officer of *Hull,* "the motor whaleboat was

WHAT'S UP FRONT — Flight weather officer checks chart with radar plot to warn pilot of weather ahead.

smashed in at the bow and finally torn clear. Several depth charges were ripped loose from the K guns and were lost overboard. Several of the metal covers of the ammunition ready boxes were ripped completely off the boxes by the wind. The bridge structure itself was under such great strain that I was greatly concerned that it might be torn off the ship.

"By this time, because of high-velocity wind gusts, the ship took several rolls of about 70 degrees. At one time the JOOD was catapulted from the port side of the pilothouse through the air to the upper portion of the starboard side of the pilothouse.

"Shortly after 1200 the ship withstood what I estimated to be the worst punishment any storm could offer. She had rolled about 70 degrees and righted herself just as soon as the wind gust reduced a bit. The wind velocity increased to a point which I estimated at 110 knots. The force laid the ship steadily over on her starboard side and held her down in the water until the seas came flowing into the pilothouse itself. The ship remained over on her starboard side at an angle of 80 degrees or more as the water flooded into her upper structures. I remained on the port wing of the bridge until the water flooded up to me, and I stepped off into the water as the ship rolled over on her way down.

"I could see only a few feet while in the water. The sea was whipped to a froth and the air was full of spray. I felt just like a pea in a pot of boiling water."

SPENCE, low on fuel, had been riding very poorly over the huge waves and mountainous swells. By 1100 so much water had seeped into the engineroom and firerooms that in one lurch a miniature tidal wave doused the engines. All power was immediately lost. Lights went out and men groped blindly as the ship, unable to move, rolled over 75 degrees.

She tried to right herself, then another wave struck and rolled her over on her side. She continued on over, trapping all the men below.

JOSEPH C. MCCRANE, Watertender 2/c, survived to tell how *Monaghan* met her fate.

"We must have taken about seven or eight rolls to the starboard before she went over on her side. When she did go over, some of the fellows tried to get the door open on the port side. It was a difficult job because the wind was holding it and the waves were beating up against it, but they did get it opened and we started out.

"A gunner's mate named Joe Guio, with no thought of his own safety, was standing outside the hatch pulling everybody out. I was about the tenth one.

"As soon as I was standing on the side of the ship I started to blow my life jacket up. I was so nervous I was barely able to do it. The waves were breaking over steadily and were carrying the fellows right off. Some of the men who had been knocked into the sea or who had jumped as soon as we heeled were being pounded to a pulp against the side of the ship.

"Finally a wave came along and knocked me off. When I landed in the water I lost all sense of direction and I was trying to beat my way to the surface. A swell took me up and placed me right on the side of the torpedo tubes. I tried to climb up to the highest point of the ship which, at the time, was the side of the 20mm shield.

"I just about reached it when another wave took me and wrapped me around the antenna. It must have spun me around four times before it threw me loose and out into the sea again."

HOW MUCH OF A ROLL can a destroyer take—and survive? Let LCDR Charles R. Calhoun, CO of USS *Dewey* (DD 349), give a little information on the subject:

"We were in constant danger of falling overboard into the sea almost every time the ship rolled to starboard. By this time (1210) our roll had increased to a consistent 65 degrees, and several officers personally witnessed the clinometer needle bang against the stop at 73 degrees, hang there for several seconds—while the ship continued to roll—and then, after a breathless eternity, come back. Competent engineroom personnel, including the chief machinist's mate, later reported that the engineroom clinometer also rested against its stop (about 75 dgrees) on two or three occasions.

"The barometer was still going down—until finally it went completely off the scale, and still kept going.

"It was inconceivable that the ship could continue to take it. On several occasions the lee wing of the bridge dipped under and scooped up solid green water. None of us had ever heard of a ship righting herself from such a roll, but this one did."

The escort carrier USS *Altamaha* (CVE 6), running before the storm, yawed, rolled heavily and was in danger of being pooped by the following sea. Speed was increased in the hope that steering would be less difficult. This meant long surfing runs down the swells with tremendous rolls at the end when the ship was brought to a slight pause in the trough. The cycle would

then start again when the next swell picked up the carrier like a giant surfboard and pushed it forward. In the valley between the seas the ship would roll heavily, while the men topside could look *up* at the sea.

THE ABOVE ACCOUNT should be sufficient to give some idea of the power of a hurricane.

Hurricanes form over all tropical oceans except the South Atlantic. West Indian hurricanes, which affect the Gulf and Atlantic coasts of the United States, for example, originate in two principal regions. One of these is the southeastern portion of the North Atlantic, near and south of the Cape Verde Islands; the other, the Caribbean Sea and Gulf of Mexico.

A fully developed hurricane consists of a well-defined area, more or less circular in shape, throughout which the atmospheric pressure diminishes rapidly on all sides toward the center. Within this area, winds blow with great force although the center itself—the "eye" and the point of lowest pressure—is a region seldom more than 10 or 20 miles in diameter in which calm or light airs prevail.

When hurricanes reach their full strength, winds of more than 150 miles per hour, and gusts as high as 186 mph, have been recorded. It has been estimated that velocities up to 250 mph have occurred. (It can only be estimated because any anemometer available has carried away long before this force has been reached.)

In spite of the high speed of the winds which rotate about the center, the forward movement of a hurricane is usually less than 12 miles an hour, especially during its early stages. As it moves northward out of the tropical waters, in which it originates, its forward speed usually increases.

The area of destructive winds varies considerably. The width may be as small as 25 miles, but has been known to extend as much as 500 miles.

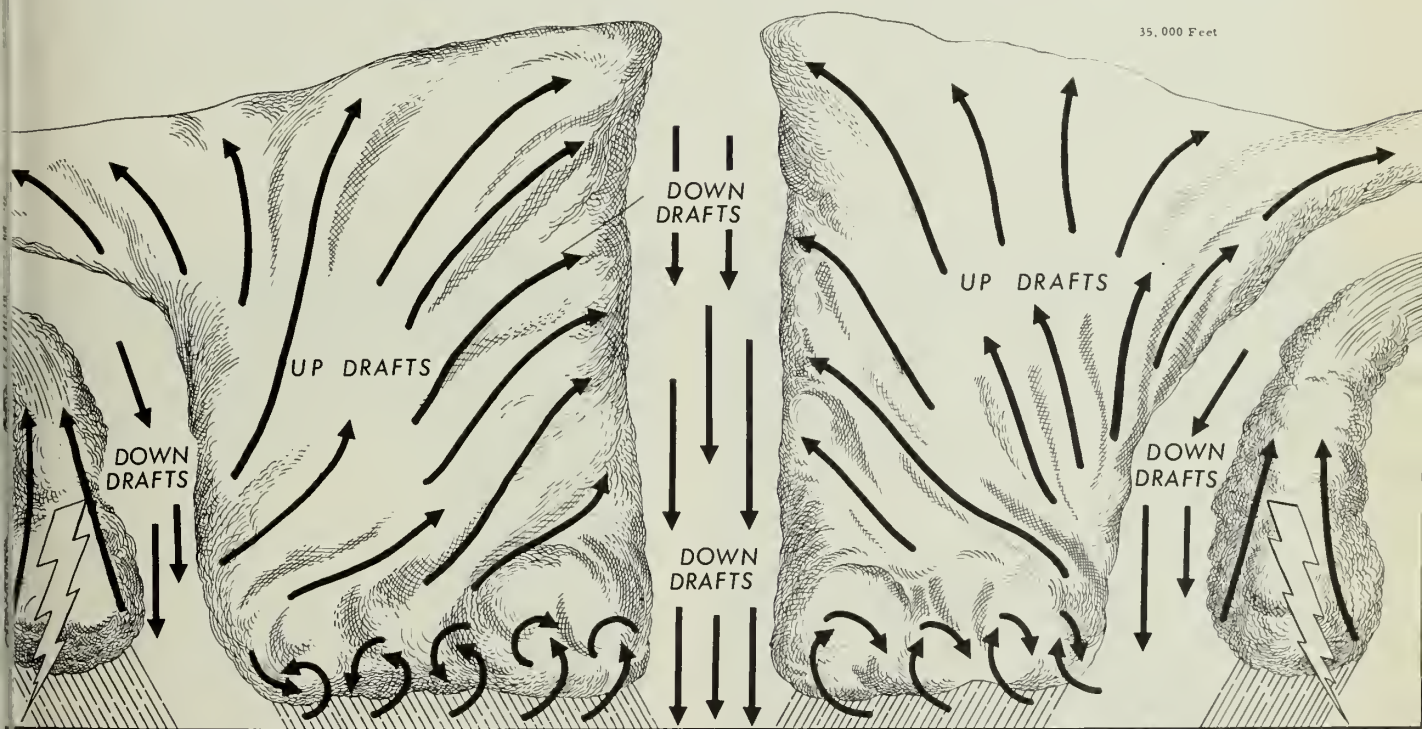
Heavy rains and clouds are present and there may be thunder and lightning. In the northern hemisphere, the winds blow counterclockwise; in the southern, clockwise.

As a hurricane moves at a relatively slow pace, it would seem that a ship should have little difficulty in avoiding it. This is quite true, of course, if the navigator is warned in sufficient time to run out of its path. (It might be well to mention here that the Third Fleet was caught in its disastrous storm because the typhoon zigged when it was reasonably assumed it would zag.)

ADEQUATE WARNING is the main reason for the existence of the Joint Hurricane Warning Service. Originally established in Miami, Fla., in 1943 by the Army, Navy and the Weather Bureau, it was then called the Miami Joint Hurricane Central. Army personnel worked at the Weather Bureau, while the Navy operated its Hurricane Weather Central at NAS Miami.

At the present time, the Service combines the efforts of the Weather Bureau, the Civil Aeronautics Administration, the Navy and the Air Force to provide advisories and warnings of hurricanes and tropical storms.

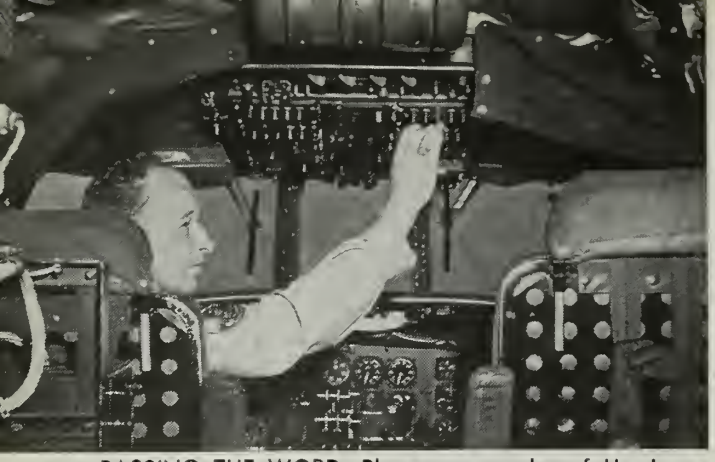
The Navy's contribution includes the Fleet Hurricane Forecast Facility at Miami, the weather reports of its ships at sea, and the Hurricane Hunter Squadron (VW-4), which is based at NAS Jacksonville. The Facility is charged with the direction of the activities



ECTIVE RINGS	25 miles	20 miles	50 Miles	30 miles	30 Miles
Bands of nderstorms rrounding body of the urricane	SUBSIDENCE AREA Wind from 15 to 25 mph Scattered low clouds with overcast above	STORM EDGE Sudden wind increase to 50 mph Little turbulence Intermittent rain Clouds lowering from 2000 to 800 ft.	AREA OF MODERATION Wind increasing from 50 mph Moderate turbulence Moderate rain Ceiling 800 ft. Inconsistent visibility Well defined sea swell	MOST TREACHEROUS REGION Wind over 100 mph Severe turbulence Horizontal sheets of heavy rain Ceiling zero Visibility zero Water appears flat owing to sheets of spray blown from whitecaps	"EYE" Very light wind No rain Fewer clouds (often patches of clear sky) Very hot Very moist High and confused sea

EACH HURRICANE IS AN INDIVIDUAL, THEREFORE THIS DIAGRAM CAN ONLY BE CONSIDERED A CONCEPTION OF THE AVERAGE CASE.

NOTE: ALTITUDE SCALE IS EXTREMELY EXAGGERATED



PASSING THE WORD—Plane commander of Hurricane Hunter has complex communications system at finger tips.

of the squadron's planes and with the analysis of data collected, forecasting, and warnings to Navy ships at sea and to Navy shore installations. The Facility also performs research on tropical storm phenomena.

THROUGH THE Joint Hurricane Warning Service, information is gathered through communications networks from island stations, ships at sea, commercial aircraft and military weather reconnaissance units. Navy and Weather Bureau meteorologists produce a coordinated warning of the development of tropical storms, their intensity and movement.

Before the days of the Service, for every ten million dollars property damage caused by tropical cyclones in the United States, about 400 people lost their lives. Today, that figure has been reduced to about two to four lives for the same amount of damage.

The Hurricane Hunter Squadron has been performing aerial hurricane reconnaissance since 1943. Various Navy aircraft squadrons have been assigned to this job and through the years many different types of aircraft have been used. Patrol bombers, seaplanes, radar reconnaissance planes, antisubmarine warfare aircraft, and even jet and propeller fighter planes have flown into hurricanes to collect weather information. Volumes of tropical weather information have been collected through these flights; but of more immediate concern, early warning of the approach of destructive storms has been provided.

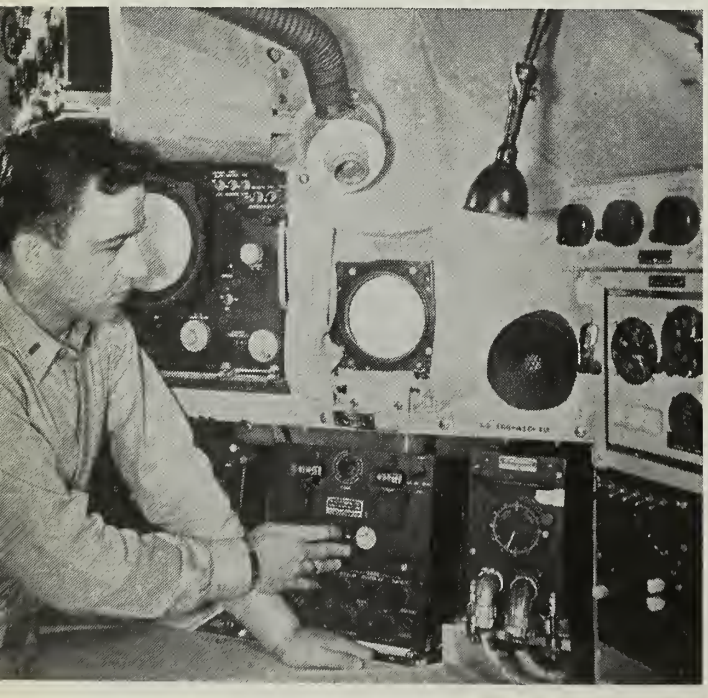
VW-4 provides early warning for the continental United States and for Navy Fleet units. This squadron has provided aerial hurricane reconnaissance since 1953 and is the seventh Navy aircraft squadron since 1943 to be assigned this mission.

THE FORERUNNER of VW-4 was Navy Weather Squadron Two (VJ-2). This sqadron was based at NAS Jacksonville during the 1952 hurricane season. Before 1952, the hurricane hunters operated out of Masters Field, Miami, as Patrol Squadron Twenty-three (VP-23). The first hurricane hunting squadron was Navy Patrol Bomber Squadron 114 (VPB-114). This was stationed in Miami and flew hurricane reconnaissance flights in 1945 in the World War II patrol bomber, the PB4Y *Privateer*. Before this time, the Navy used aircraft from various naval activities in the Caribbean and Gulf of Mexico areas. The first aircraft used were PBM *Mariner* flying boats.

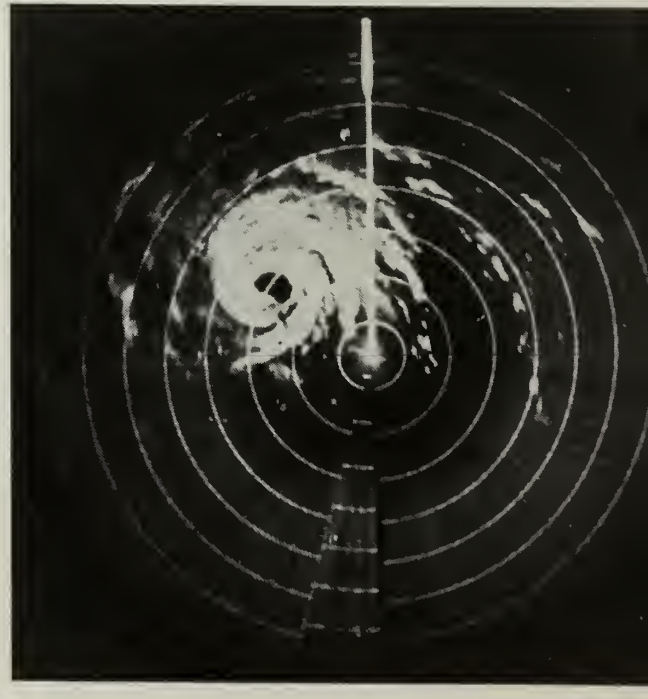
Techniques have improved greatly during the years. To VP-23, which operated out of Miami from 1949 through 1951, must go the credit for the development of the low-level penetration technique begun in 1952.

Using this method, reconnaissance is performed at an altitude of 300 to 500 feet, and penetration into the eye of the hurricane is also made at this level. Although this is considered to be the most dangerous type of flying in the world, only one plane has been lost since the Service was founded. In 1955 one of VW-4 planes, a P2V *Neptune,* was lost with all hands in the Carib-

HERE WE ARE—A navigator on board a *Super Connie* on hurricane patrol checks plane's position by LORAN.



CAUGHT—Hurricane is photographed on radarscope of Navy WV *Super Constellation* during storm track-down.



bean Sea while penetrating the eye of a hurricane.

No formal training is conducted for prospective hurricane hunters. Pilots and other personnel are assigned to VW-4 just as they are to any other squadron. They are taught the techniques of storm reconnaissance within the unit.

SINCE 1957, when the Squadron's P2Vs were withdrawn, WV-3 *Super Constellations* have been used exclusively for reconnaissance. Adoption of the *Constellation* marks the beginning of a phase in which more emphasis is laid on electronics.

When the P2Vs were used, they could—and did—penetrate storms as low as 300 feet above the water. The size of the *Super Connie* makes such low-level penetration impractical, but the plane's greater operating range, superior radar and advanced weather equipment compensate for the difference.

The *Constellation,* with a crew of 25 officers and whitehats, is capable of flights as long as 18 hours with a cruising speed of 240 miles per hour.

The "Weather Station" of the aircraft is located in the rear portion of the radar spaces. This station is equipped with specially adapted airborne weather instruments as well as communications equipment, a wire recorder, and an installation for dropping meteorological instruments by parachute.

A RECONNAISSANCE CREW is divided into three distinct teams: *basic flight, weather* and *radar.*

The flight team includes the pilot, two co-pilots, a non-pilot navigator, two co-pilot navigators, two flight engineers, two radiomen and two electricians. The weather team is made up of the flight aerologist or weather officer and his assistant, and two aerographer's mates. The CIC officer, two assistant CIC officers, four air controllers and two electronic technicians form the radar team.

The flight aerologist is a qualified meteorological officer who has either received formal training in meteorology at the U. S. Naval Postgraduate School at Monterey, Calif., or he is an LDO aerology officer who has obtained a great deal of practical experience and training in meteorology as an aerographer's mate.

No matter what his origin, upon joining the squadron, an aerologist must complete a VW-4 syllabus based upon tropical meteorology and hurricanes.

RECONNAISSANCE of hurricane "Helene" in 1958 offers a good picture of the Squadron's routine.

Aircraft from the Squadron had the storm under surveillance during 123 of the 132 hours between the time it was first detected and at the time it no longer posed a threat to the United States land areas. While maintaining this vigil, 194 weather messages were sent out by radio, 103 storm center fixes were made and 28 dropsondes were released.

These facts provided the Joint Hurricane Center in Miami with data which permitted timely warnings to all areas threatened by Helene. The Squadron kept the hurricane under close surveillance as it spiraled up the Atlantic coast toward Cape Hatteras.

Squadron aircraft were meanwhile keeping an eye on yet another hurricane, Ilsa, which was born while Helene was still active. It was located some 1100 miles southeast of Helene's position and required the Squadron to divide its efforts to keep an eye on both.

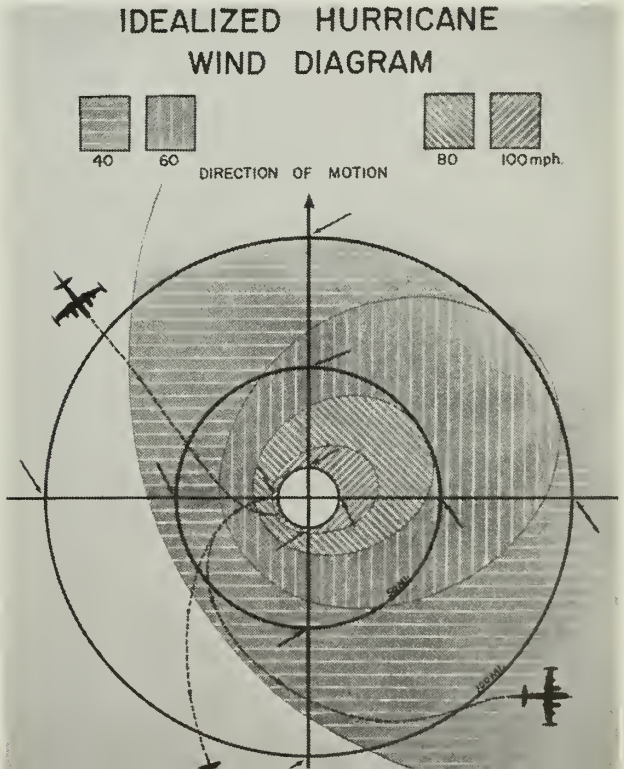
TIME OUT—Crew members on normal 14-to-18-hour recon flight relax in their airborne bunks while off duty.

During the afternoon and night of September 27, while Helene threatened the North Carolina coastline, a plane spent seven continuous hours in the eye of the storm, sending reports of the hurricane until it finally cleared Cape Hatteras and moved out to sea.

Informed that Ilsa presented no threat to the east coast of the U. S., the Squadron turned its attention to the season's tenth tropical storm, Janice.

The Hurricane Hunters, as you can see, really look out for the ladies, and they're quite adept at it.

LOOKING DOWN—Chart made through studies of hurricanes shows what makes nature's big wind storms.



TAFFRAIL TALK

WE ARE PLEASED to announce that our respected and erudite opposite number in the Royal Canadian Navy, *The Crowsnest*, also has its problems. Seems that the editors finally confessed complete mystification as to the significance of a pennant —a black battle-axe on a yellow background—reported to be seen flying from *HMCS Ottawa*. They finally learned it was flown only when relatives, particularly wives, were embarked. In much the same category, we suspect, as our own Navy's What-the-Hell pennant.

★ ★ ★

We know better, but we like to live dangerously. Thus, we report with some trepidation, the claim of USS *Bryce Canyon* (AD 36) to have on board the youngest PO1 in the Navy. He's 20-year-old Bobby Bolen, an EM1, who, says *Bryce*, has risen just about as high as any enlisted man can on a minority cruise.

★ ★ ★

USS *Essex* (CVA 9) wants to know:

• What ship of recent era (within the last 50 years, say) holds the record for time at sea without returning to home port? This applies only to peacetime, not war periods.

• Does the *Essex's* mark of steaming 53,000 miles in seven and one-half months approach the peacetime record?

• Does *Essex's* mark of serving with three Fleets—Second, Sixth and Seventh—in an eight-month period, approach any peacetime record?

Frankly, we haven't the slightest idea.

★ ★ ★

Just as we were about to end this series of profound profundities on the above note, our Editor-in-Charge-of-Fascinating-Statistics ruined our day by a follow-up account on last month's report about USS *Roanoke* (CL 145):

She travelled 46,058.12 miles in a six-month period and, in doing so, consumed 5,103,901 gallons of fuel oil which, says our EICOFS, would be more than enough to make a stream of fuel one foot deep and one foot wide 129 miles long; consumed 8,487,019 gallons of water which, he says, is enough to flood a city street one foot deep for three miles. (These are his figures, not ours. Don't ask *us* how wide the street was. Ask him.)

He also insisted on telling us—as if we didn't have problems of our own—that 3423 pounds of soap powder was used, enough to scrub down 79 acres of bulkheads, overheads and decks; 2075 packages of paper towels, enough to supply a family of four for 25 years. (Not *our* family! Remind us to ask him someday how he comes up with these weird "enough to" figures.)

We left him whimpering with delight as he pored through the records of the ship's C&SS. He was trying to determine the significance of the sales of the 80,000 candy bars, 150,000 cokes, 50,000 milk shakes, 2500 rolls of film and 46,000 razor blades during the cruise. At last report, he was seen smoking cigars at a furious rate in an attempt to discover how long it would take to consume 40,000 of them. We'll let you know how he makes out.

The All Hands Staff

The United States Navy

Guardian of our Country

The United States Navy is responsible for maintaining control of the sea and is ready force on watch at home and overseas, capable of strong action to preserve the peace or of instant offensive action to win in war.

It is upon the maintenance of this control that our country's glorious future depends. The United States Navy exists to make it so.

We Serve with Honor

Tradition, valor and victory are the Navy's heritage from the past. To these may be added dedication, discipline and vigilance as the watchwards of the present and future. At home or on distant stations, we serve with pride, confident in the respect of our country, our shipmates, and our families. Our responsibilities sober us; our adversities strengthen us.

Service to God and Country is our special privilege. We serve with honor.

The Future of the Navy

The Navy will always employ new weapons, new techniques and greater power to protect and defend the United States on the sea, under the sea, and in the air.

Now and in the future, control of the sea gives the United States her greatest advantage for the maintenance of peace and for victory in war. Mobility, surprise, dispersal and offensive power are the keynotes of the new Navy. The roots of the Navy lie in a strong belief in the future, in continued dedication to our tasks, and in reflection on our heritage from the past. Never have our opportunities and our responsibilities been greater.

ALL HANDS the Bureau of Naval Personnel Information Bulletin, is published monthly by the Bureau of Naval Personnel for the information and interest of the naval service as a whole. Use of funds for printing of this publication is approved by the Director of the Bureau of the Budget 25 June 1958. Opinions expressed are not necessarily those of the Navy Department. Reference to regulations, orders and directives is for information only and does not by publication herein constitute authority for action. All original material may be reprinted as desired if proper credit is given ALL HANDS. Original articles of general interest may be forwarded to the Editor.

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The Bureau invites requests for additional copies as necessary to comply with the basic directive. This magazine is intended for all hands and commanding officers should take necessary steps to make it available accordingly.

The Bureau should be kept informed of changes in the number of copies required.

The Bureau should also be advised if the full number of copies is not received regularly.

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Distribution to Marine Corps personnel is effected by the Commandant U. S. Marine Corps. Request from Marine Activities should be addressed to the Commandant.

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• AT RIGHT: *LUCE* LAUNCHED— Navy's newest guided missile frigate, *Luce* (DLG 7), goes down the ways after launching ceremonies. She is equipped with the latest in missile fire power to provide antisubmarine and antiaircraft protection.

TRIBUTE

for a JOB WELL DONE

ALL HANDS

special issue
UNDERSEAS NAVY

This magazine is intended for 10 readers. All should see it as soon as possible. PASS THIS COPY ALONG

MARCH 1959

ALL HANDS

THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN

MARCH 1959 Nav-Pers-O NUMBER 506

TABLE OF CONTENTS

• **FRONT COVER: BATTEN DOWN**—Highly trained hands of fellow divers secure deep sea diving helmet on Alan May, EN1, USN, as he prepares for test in recompression chamber at School for Deep Sea Divers in Washington, D.C.

• **AT LEFT: OTHER WORLDS**—Resembling men from another planet, Navy underwater demolition men examine Arctic ice in preparation of blasting path for landing craft.

• **CREDITS:** All photographs published in ALL HANDS are official Department of Defense Photos unless otherwise designated.

DOWN BELOW—Navy underwater men perform many jobs. *Left:* EOD man goes below. *Rt:* PH photographs hull.

Over the Centuries:

MEN HAVE BEEN GOING "down to the sea in ships" for thousands of years. They have also been going down *in* the sea—in everything from birthday suits to barrels—for a very long time. In the couple of centuries that the U.S. Navy has been sailing the oceans, it has made some notable contributions to underseas knowledge and exploration. But there's still lots to learn—we've, literally, just broken through the surface.

This issue is about the underseas world, and what the Navy has been and is doing to find out more about it. We're starting off with a bit of history, and that, of course, brings up the subject of diving.

The darkness of prehistory obscures the "who, when and where" of man's first venture into the underwater world. Chances are, the first divers used no equipment at all, except perhaps a stone to get them to the bottom more quickly. (Even today, pearl and sponge divers in some parts of the world still use the same technique.)

It is known that there were divers more than 800 years before the beginning of the Christian era, for Homer, the great Greek poet, referred to them in this passage from the *Iliad* describing the fall of a charioteer:

"Ye Gods! With what facility he dives!
Ah! It were well if, in the fishy deep,
The man were occupied—he might no few
With oysters satisfy—although the waves
Were churlish—plunging headlong from his bark
As easily as from his chariot here!
So, then, in Troy, it seems, are divers too!"

Xerxes, who ruled Persia from 486 to 465 B.C., is said to have used combat divers in naval warfare. According to Herodotus, the father of history, the Persian king also ordered some salvage diving to be done.

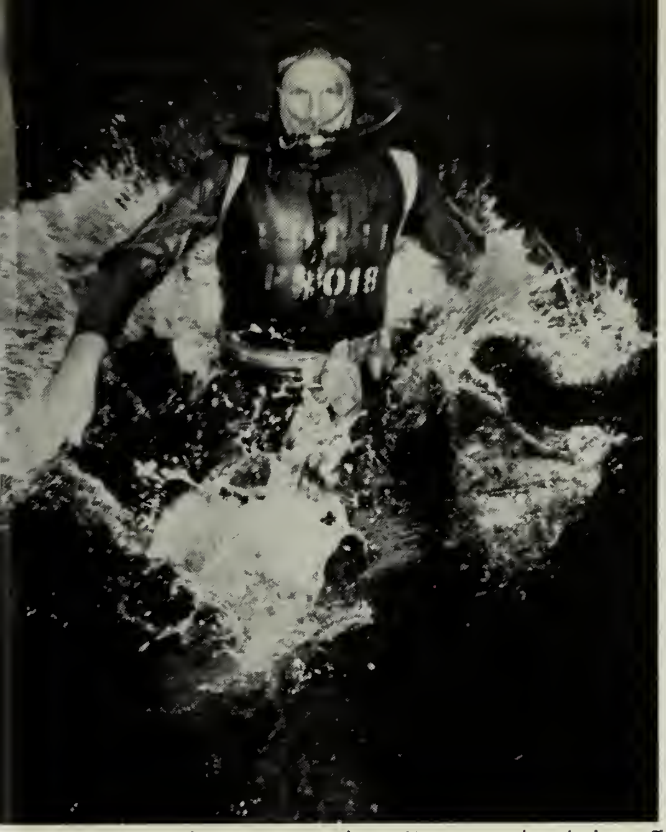
In about 460 B.C., Herodotus wrote of a famous Greek diver named Scyllis who was hired by Xerxes to recover treasure from some wrecked Persian ships. After Scyllis had finished the job Xerxes tried to keep him around, but Scyllis had other ideas. In the midst of a storm he slipped over the side, cut the anchor cables of Xerxes' ships and, during the confusion which ensued, swam nine miles to freedom.

Another historian, Thucydides, tells of the Athenians using divers in about 415 B.C., during the siege of Syracuse. These early UDT men (perhaps in Greek they'd be Upsilon-Delta-Tau men) sawed down underwater barriers built to obstruct Greek ships.

ABOUT 333 B.C., Alexander the Great also employed the ancient version of frogmen when he sent divers to destroy the boom defenses of the harbor at Tyre. Alexander himself is supposed to have taken a first-hand look at the underwater world when he was lowered into the deep in a glass barrel.

The underwater warriors at Syracuse and Tyre weren't the only ones in the annals of early naval warfare. References to divers who cut (or tried to cut) the anchor cables of enemy ships can be found in accounts of the sieges of Byzantium in 196 A.D.; Les Andelys, France, in 1203; Malta in 1565; and Mayenne, France, in 1793. Until the early 1800s, Spanish warships carried men who dived without breathing appliances to cut cables and perform other underwater tasks for the fleet.

Underwater tactics figured not only in war, but also in love among the ancients, at least according to Plutarch, the famous Greek biographer. As he tells it, when



ALL WET—Underwater Demolition Team member 'takes off.' *Rt:* Deep sea diver makes his way over ocean's bottom.

Men Under the Sea

Anthony couldn't get a bite in a fishing contest held before Cleopatra, Anthony got a diver to keep his hook supplied with fish. Cleopatra soon grew suspicious of Anthony's sudden change of fortune, so she brought in an underwater accomplice of her own. Next thing Anthony knew he was pulling out a fish that had already been dried and salted.

Some of the early Greek divers apparently used crude breathing apparatus. Aristotle, who lived from 384 to 322 B. C., tells of divers who could stay underwater for a long time through the use of instruments which enabled them to draw air from above the surface. He also reports that divers breathed from containers full of air lowered to them.

Pliny the Elder, a Roman naturalist and author, wrote in 77 A. D., of combat divers who got their air from a tube held in the mouth. The other end of the tube floated on the water's surface.

THROUGH THE CENTURIES all sorts of breathing devices, underseas suits, diving bells and you-name-its have appeared, but most of them didn't get beyond the drawing table stage. Here are just a few of them.

• Some time around 1250, Roger Bacon, an English philosopher, wrote of ". . . . . a machine, or reservoir, of air to which labourers upon wrecks might resort whenever they required to take breath." Evidently this was some sort of diving bell (a container which holds air under water in the same way an inverted drinking glass will when pushed below the surface).

• About 1500 Leonardo da Vinci, who seems to have foreseen practically everything that was ever invented, designed a number of diving rigs and gadgets. One of his outfits included sandbags which gave the diver the extra weight needed to take him to the bottom. When he was ready to come back up he simply emptied the bags.

• A 1511 edition of an ancient book on military matters, printed at Erfurt, Germany, contains what is thought to be the first picture of a diving suit ever to appear in a printed volume. The engraving shows the diver with his head enclosed in a tight-fitting leather bag which had no eye-holes. The bag tapered at the top to a long slender tube which extended to the surface. The top of the tube was kept afloat by a bladder.

• In 1524 another picture of a leather diving helmet appeared in print. This time the helmet had eye-ports and the breathing pipe was reinforced with iron rings.

• In 1679, Giovanni Alfonso Borelli, an Italian mathematician and physicist, came up with an ingenious, but impractical, outfit that featured a metal helmet, an attached pipe which was supposed to regenerate exhaled air and a cylinder-and-piston gadget which the diver cranked when he wanted to change his displacement, so that he could go up or down.

• In 1680 William Phips (or Phipps) of the colony of Massachusetts contrived a diving bell which he later used to recover a fortune from a treasure-laden Spanish gallcon sunk off the Bahamas. As a result of his find the former ship's carpenter apprentice became a very wealthy man, and was knighted and named sheriff of New England.

• In 1776 David Bushnell completed his famous *Turtle* (see ALL HANDS, April 1958), a primitive submarine which almost succeeded in blowing up a British man-o'-war while the warship was in New York harbor.

MOST UNDERWATER EQUIPMENT designed before 1800 was pretty crude by today's standards. However, by then diving bells and helmets were in use for salvage jobs as deep as 60 feet, and reasonably practical air compressors had been developed.

The advent of the air compressor revolutionized underseas diving as we think of it today, for this made it possible to maintain an air pocket against considerable pressure, and for the diver to go deeper and remain on the job longer.

It also brought up the problem of the bends, or decompression sickness, caused by too sudden a change from high air pressure to ordinary air pressure. Scores of men—most of them construction laborers working in caissons on bridge-building jobs—were killed or maimed by the disease before the French physiologist, Paul Bert, discovered its causes in the 1870s and advocated gradual decompression. Even after that "caisson disease" was responsible for many deaths and much suffering until Professor J. S. Haldane, of England, worked out his stage system of decompression. With this method which came into general use about 1907, a man who had been working under pressure was held at certain depths for set periods of time until it was safe for him to come to the surface.)

In 1819 the diving suit from which the standard diving outfit of today evolved was introduced by Augustus Siebe of England. Called the "open" dress, it consisted of a round metal helmet with a shoulder plate that could be attached to a waterproof leather jacket. The helmet was fitted with an air inlet valve, from which a flexible tube ran up to an air pump on the surface. The outfit worked on the same principle as the diving bell, since the air forced into the helmet kept the water below the diver's chin. The edge of the jacket was unsealed so that "used" air escaped around the bottom of the jacket while fresh air was coming into the helmet.

THE "OPEN" DRESS had one very serious flaw. If the diver stumbled and fell, or bent over too far, water filled his helmet and he had to come up quickly—or else. In spite of this drawback, the suit made it possible for a man to stay underwater for an hour or so.

In 1837 Siebe modified his 1819 suit and came up with a "closed" dress, which was worn with a helmet that had an air inlet and regulating outlet valves. With the various improvements that have been made over the years, this is the type of suit most commonly worn by divers today.

During the interval between the appearance of Siebe's open and closed dresses W. H. James designed an outfit which required no air connection with the surface. In this 1825 version of SCUBA (Self-Contained Underwater Breathing Apparatus) the diver breathed compressed air from a belt around his waist. The trouble with this scheme was that the diver couldn't carry enough air to keep going very long.

The first practical Scuba—one with oxygen rebreathing apparatus—didn't come along until 1878. Another Englishman, Henry A. Fleuss, is credited with this development. Its usefulness was well demonstrated in 1880 by Alexander Lambert, a famous English diver who wore it when he made his way a quarter of a mile through a flooded tunnel, strewn with all sorts of obstacles, to close an iron door and sluice valve so that the tunnel could be pumped out.

MEANWHILE—back in America—these developments had taken place:

• In 1838 W. H. Taylor had come up with a metal diving dress which, according to one authority, ". . . . . has a fair claim to be considered the first design for a completely armoured and articulated diving dress intended to safeguard its wearer against deep-water pressure. . . . . " A model of it appears on page 33.

YESTERDAY'S underwater dreams and experiments are recorded far back in the history of man and the sea.

• In 1856 L. D. Philips designed an outfit that anticipated quite a few of the features of the most successful modern armored dress.

• During the Civil War both the Union and Confederate Navies had dabbled in submarines, and one of the Confederate craft managed to blow up and sink USS *Housatonic* off Charleston, S. C., in 1864. (See ALL HANDS, April 1958.)

Chances are there were some divers in the U. S. Navy by the time Lambert pulled off his tunnel exploit. Trying to track them down is like looking for a needle in a stack of seaweed. As early as 1882 there was a diving school at the Torpedo Station, Newport, R. I., run by a retired chief gunner's mate named Jacob Anderson.

Since Anderson presumably learned to dive in the Navy, it seems safe to conclude that there were Navy divers before there was a school for them.

The volunteer students at the school were gunner's mates who learned diving in just two weeks (which was probably more than enough time to teach them all that the Navy knew about diving in those days). Graduates usually wound up searching for practice torpedoes on the firing range off Newport. By regulation, they weren't supposed to go beyond a depth of 60 feet but, since the range was 130 feet deep in spots and the divers were paid under a bonus arrangement, Anderson and others regularly went below the regulation depth.

IN 1898, when USS *Maine* blew up and sank in Havana harbor, the Navy's divers had a chance to prove that they could do a lot more than recover torpedoes.

Following the disaster, one of the big concerns of *Maine's* skipper, CAPT Charles D. Sigsbee, was to get American divers to Havana to recover the ship's cipher code and the keys to her magazines. The code, of course, had to be kept out of foreign hands. The keys, which were hung at the foot of the captain's bunk when not in use, were important to the investigation of the sinking, since their presence in the usual place would be a pretty good indication that *Maine's* magazines had been secured at the time of the explosion.

The divers arrived within a few days and were soon groping their way around in the wreckage. They came up with the cipher code first, but the hunt for the keys took a little longer. One diver reported that he had looked all over the captain's cabin and couldn't find a trace of the keys. W. H. F. Schluter, GM2, of USS *New York* had better luck. He finally located them, hooked to the captain's mattress which was floating against the overhead.

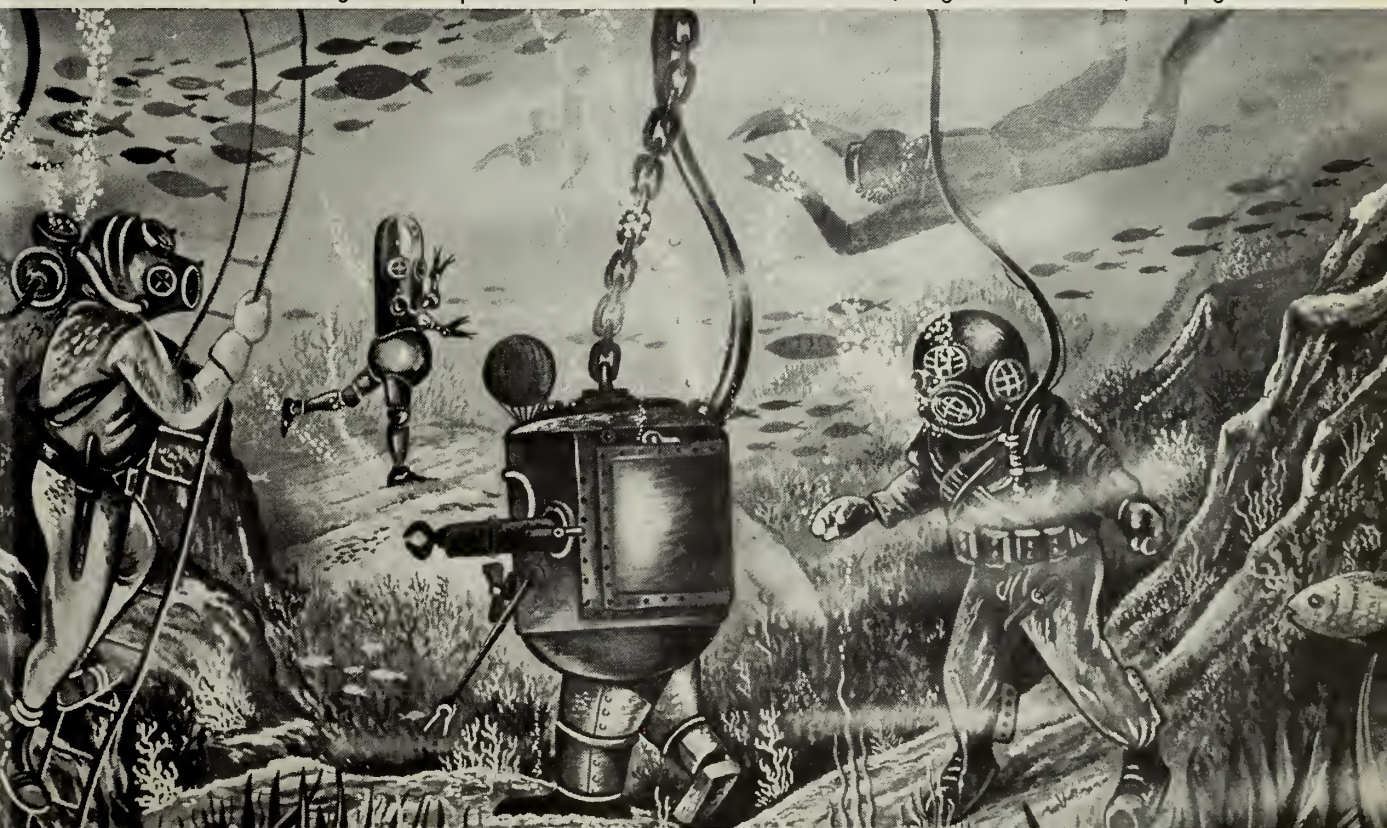
The divers proved helpful not only in finding the keys and the code, but also in trying to track down the causes of the explosion. Several of them, from USS *Iowa* and *New York*, were questioned about the condition of the wreckage by a court of inquiry which met in Havana shortly after the mystery blast.

When the excitement over *Maine* had died down, Navy diving slipped back into obscurity for a while. In 1909 LT Kenneth Whiting made a naked free escape from the torpedo tube of USS *Porpoise*, 26 feet below the surface of Manila Bay, but other than that, not much was doing.

By 1912 divers in England, using Haldane's decompression tables, were reaching depths which made the U. S. Navy's regulation 60 feet look like mere wading. So, Chief Gunner George D. Stillson figured it was high time something was done to modernize the Navy's diving.

He wrote up a report, full of constructive criticism, and requested an assignment in which he could try out the latest methods and equipment. As a result, in 1913 he was ordered to Brooklyn, N. Y., and given an

STRANGE LOOKING designs of the past are shown here with present diver, frogman. For others, see pages 32-35.



SALVAGE of *USS Lafayette* (ex-*Normandie*) in N. Y. harbor provided classroom for Navy salvage divers.

experimental diving team composed of four chief gunner's mates and Surgeon G. R. W. French, who had studied at England's Royal Navy Diving School. In the tanks of a Brooklyn firm (that supplied diving gear to the Navy) the experimenters were soon reaching a simulated depth of 256 feet. They also conducted tests from the destroyer USS *Walke*, in Long Island Sound, where they got down to 274 feet in 1914 to establish a new record for the open sea.

STILLSON'S EXPERIMENTS paid off in several ways—among them, the establishment of a modern Navy Diving School at Newport, the preparation of a Navy diving manual and improvements in gear and technique. In 1915, when the submarine USS *F-4* sank off Honolulu, Navy divers were able to reach her at a depth of 304 feet—probably a record for useful diving in the standard rig with air as a breathing medium.

When the United States entered World War I the diving school at Newport was closed. Its instructors, and some of its graduates, became the nucleus of the overseas salvage division which was part of the United States Naval Forces abroad. Throughout the war these men were engaged in salvage operations along the French coast.

In the mid-1920s two submarine disasters made it plain that despite Stillson's efforts, there was plenty of room for further improvement in Navy diving.

On 25 Sep 1925, USS S-*51*—rammed by a steamship—sank in 132 feet of water off Block Island, R. I. Just three of her crew of 37 survived. At that time only 20 Navy divers were qualified to go below 90 feet, and only six civilian divers on the entire East Coast were willing to chance a depth of 132 feet.

Salvage operations began on 26 Sep 1925, but, because of interruptions by winter storms and because so few divers were trained to work at such depths, it wasn't until 5 Jul 1926 that the sub was finally raised.

On 17 Dec 1927, there was another collision—this time between a Coast Guard cutter and USS *S-4*, which sank, with 40 men on board, to a depth of 102 feet off Cape Cod. USS *Falcon* (then AM 28, but later redesignated ASR 2), a veteran of the *S-51* job, raced to the scene. Her divers reported signs of life in the sub 22 hours after the sinking and managed to ventilate the helpless boat. However, winter storms forced abandonment of the rescue attempt a week after the accident.

On 27 Dec 1927, the salvage-phase of the job began. Once more the shortage of qualified divers—only 24 were available—hampered the operation. It wasn't until 17 Mar 1928 that *S-4* was finally raised by divers working from *Falcon*.

Chief Gunner's Mate Tom Eadie was awarded the Medal of Honor for heroism on the *S-4* job.

EVEN BEFORE the 1925 and 1927 disasters there had been concern that divers might be called upon to do rescue and salvage work in very deep water, where a man, breathing air, couldn't think clearly or work effectively. In 1919 Professor Elihu Thompson, an electrical engineer and inventor, had suggested the use of helium (instead of nitrogen) in the diver's breathing mixture as a solution to this problem. Since the Bureau of Mines was then trying to figure out what to do with helium, Thompson made his suggestion to that agency.

In late 1924 the Navy's Bureau of Construction and Repair (now BuShips) joined the Bureau of Mines in the experimental work on helium-oxygen mixtures which was being conducted at the Bureau of Mines Experimental Station in Pittsburgh, Pa. The experiments indicated that helium-oxygen had a number of advantages over air for deep dives. Besides eliminating undesirable mental effects, the new mixture held promise of cutting down on decompression time.

By early 1927 the work on helium-oxygen mixtures had progressed so well that the Navy decided to transfer the operation from Pittsburgh to what is now the Naval Gun Factory, Washington, D.C., and to make the Experimental Diving Unit a permanent activity. At about the same time the U. S. Naval School, Deep Sea Divers, was also permanently established at the Naval Gun Factory, where proximity to the Experimental Diving Unit would enable students and instructors to apply the findings of the experimenters with a minimum of delay.

In 1937 a diver on helium-oxygen reached a simulated depth of 500 feet in one of the tanks at the Experimental Diving Unit—a feat which made it plain that depth was no longer the obstacle to submarine rescue and salvage work that it once had been.

THE MOMSEN LUNG—a submarine escape appliance—(see page 36), and the submarine rescue chamber designed by CDR Allen R. McCann, also held out hope that tragedies like those of the mid-Twenties could be averted in the future.

The McCann chamber and helium-oxygen diving were put to a real test in 1939. On May 23 of that year USS *Squalus* (SS 192) submerged with her main induction valve open and sank in 243 feet of water off the Isle of Shoals in the North Atlantic (see page 59). *Falcon*, the same ASR which had been in on the *S-51* and *S-4* jobs, was on hand the next morning with the rescue chamber. CDR Charles B. Momsen, a pioneer in the field of submarine escape, was in charge of diving.

At 1014 on 24 May, M. C. Sibitsky, BM2, attached the rescue chamber's down-haul cable to the forward hatch of *Squalus*. At 1130 the chamber was lowered over *Falcon's* side and, during the next 12 hours, the chamber made four round trips to bring up all 33 survivors from the forward part of the sub. The rescue chamber was then attached to the after hatch of *Squalus*.

Up came the word that there were no signs of life. The after part of the sub had been flooded when *Squalus* went down.

Now the rescue effort became a salvage job, which resulted in the first field application of helium-oxygen diving. With the new mixture men were able to think clearly and work efficiently despite the 243-foot depth. Surface decompression with oxygen was also used successfully on this operation.

On 13 Sep 1939, after months of effort, *Squalus* was towed into port. Rechristened *Sailfish* (SS 192), she went on to fight in World War II.

If it hadn't been for the experiments in helium-oxygen she'd probably still be on the bottom. Yet, even with the new breathing mixture and rescue chamber, the *Squalus* job had been far from a cinch. Four divers —William Badders, MMC; Orson L. Crandall, BMC; James H. McDonald, MEC; and John Mihalowski, TM1 —got the Medal of Honor for extraordinary heroism during the operation.

AT THE TIME of the *Squalus* disaster the number of divers in the Navy was still quite small and restricted to just a few ratings. World War II changed that. New ships, especially designed for ship salvage work and service under wartime diving conditions, made their appearance. And, training facilities had to be expanded to turn out the divers in a variety of ratings who were to work from these ships.

About the time this expansion was under consideration, a fire broke out in USS *Lafayette* (APV 4), the former French liner *Normandie*, moored at Pier 88, North River, New York, N. Y. While the fire was being put out, the ship capsized.

This misfortune put an end to the problem of deciding where to train our wartime salvage divers. A school was set up on Pier 88, so that student divers could get valuable practical experience in ship salvage.

Established on a permanent basis in September 1942, the Naval Training School (Salvage) remained at Pier 88 until 1946. Then, as the U. S. Naval School, Salvage, it was moved to Bayonne, N. J. It stayed there until the summer of 1957, when the courses for salvage divers and salvage diving officers were both moved to Washington, D. C.

The salvage training programs weren't the only diving developments to come out of the war. In 1943 the Navy began to organize the Underwater Demolition Teams which took part in amphibious operations in both the European and Pacific theatres. Most of the men in the first UDT units were Seabees, who worked without much more equipment than face-masks and swim fins. However, self-contained underwater breathing apparatus was soon to enter the frogman picture.

The military potential of Scuba diving was most effectively demonstrated during the war by the Italian and British navies. Operational swimmers of the Office of Strategic Services also used this type of equipment. In the U. S. Navy the first submersible operations platoon was organized in 1947 for the purpose of applying Scuba to UDT operations. Nowadays Scuba is used not only by the UDTs, but also by members of Explosive Ordnance Disposal Units and men working on a variety of underwater tasks. In 1954, because of the growing need for Scuba divers, the Navy set up a special school for them—the Naval School, Underwater Swimmers, at Key West, Fla.

IN THE POST-WORLD WAR II years the Experimental Diving Unit has developed and tested many types of Scuba equipment and made numerous studies of the physiological problems involved in Scuba diving. At the same time, it has continued its work on helium-oxygen equipment and techniques, and it has worked out tables for surface decompression after air dives, using oxygen to shorten decompression time. On 3 Mar 1949, as part of the unit's work in helium-oxygen diving, Boatswain's Mate Harold Weisbrod made a simulated dive to 561 feet, while breathing that mixture, the first of a series of such dives. By 18 May 1949 ten other divers had made the same dive.

The post-war period has also seen improvements in submarine escape techniques. In 1956, after thorough studies, the Navy adopted "buoyant free ascent" as the recommended method of individual escape from a disabled submarine when there is no chamber available for group rescue. (In the simple technique, which is considered quite an improvement over older individual escape procedures, the submariner is propelled to the surface by the buoyancy of his inflated life jacket. To keep his lungs from bursting on the way up, he exhales vigorously as he leaves the sub.)

Thanks to modern experimentation and an increasing interest in the underwater world, man has learned more about diving in the past century and a half than he did in all the thousands of years before it put together.

But he still has a lot more to learn. —Jerry Wolff

TOUCH AND GO—Navy underwater explosive experts cleared harbors in WW II. Here, charge is placed.

Sailing with the Silent

WHEN USS *Nautilus*, SS(N) 571, arrived in England after her journey under the North Pole, just about every reporter who talked to her crew commented on the fact that the nuclear submariners viewed their history-making voyage as little more than a strictly routine trip.

There was no phony modesty.

The submariners knew they had done something important, but they were genuinely convinced their feat was a perfectly natural thing to expect of a good ship and well-trained officers and enlisted men. Everyone on board had his job to do. He had done it—and success was almost a foregone conclusion.

The kind of men who hold that attitude were pretty well described by a British observer who said:

"One would think Washington built them to specification. They seem to be a group of men less likely than any other group in the world to get on each other's nerves, panic in fear, crack under pressure or let each other down. They are all smoothly-sanded round pegs in round holes, and there's not a jagged edge in the pack."

Although it's easy to make mistakes when you generalize about people, chances are you won't go too far wrong applying this description to the crew of just about any submarine, whether it's a brand-new nuclear type or the oldest World War II ship in the Fleet. In fact, the picture is a pretty good likeness of the biggest group of men in the whole underwater Navy — the submariners.

THE GUYS who wear dolphins are no supermen. They have no monopoly on courage, intelligence, "team spirit" or any of the other characteristics that most Navymen have. But somehow, somewhere along the line, they become as distinct a breed of Navyman as the true "tin can sailor," the "airdale" or anyone else who believes his own particular part of the Navy is something special.

Those qualities which transform a plain Joe Doakes into a submariner are sometimes hard for the outsider to understand. Among them are such factors as "motivation," selection, training, the submariner's way of life and that important intangible called *esprit de corps*.

Motivation is reflected in the fact that all submariners are volunteers. The reasons behind their volunteering fit no standard patterns.

Says R. E. Korn, LCDR, USN, who saw a lot of World War II action in USS *Trigger* (SS 237):

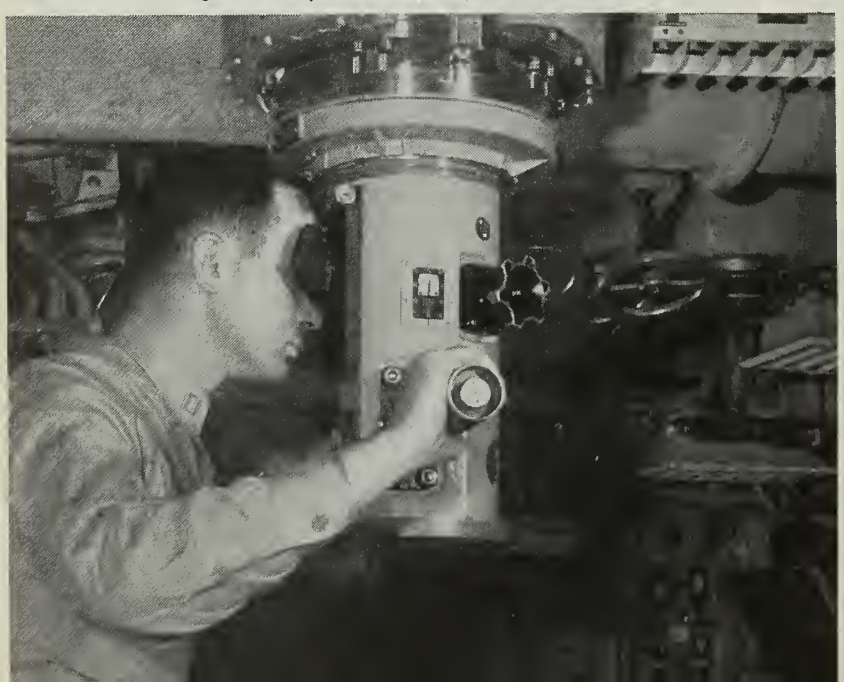
"I got into submarines back in 1930, when I was a yeoman striker in a submarine tender. One of the subs in the squadron needed a yeoman, so I just volunteered."

Joseph E. Marion, YNC (SS), USN, a veteran of five war patrols in USS *Bluegill* (SSK 242), explains his motives this way:

"I was a battleship sailor from 1940 to '42. In those days battleships were so regulation that when we ate we sat at the table according to seniority, and we had to get permission to talk to an ensign. Being a seaman, I was low man on the totem pole.

"Then, I saw how the submariners lived — better chow and all you

UNDERWATER SAILORS—An officer on board *USS Albacore* (AGSS 569) takes a look through the scope at things topside while cruising below surface.



wanted of it, better liberty, higher pay and not so much formality as we had on our ship. I decided then and there that submarines were the thing for me."

A. A. Burki, LCDR, USN, now in his 11th year as a submarine officer, gives these as two of his main reasons:

"While I was First Classman (senior) at the Naval Academy during World War II, I spent a week of my summer leave riding subs out of New London, Conn. I liked them from the start.

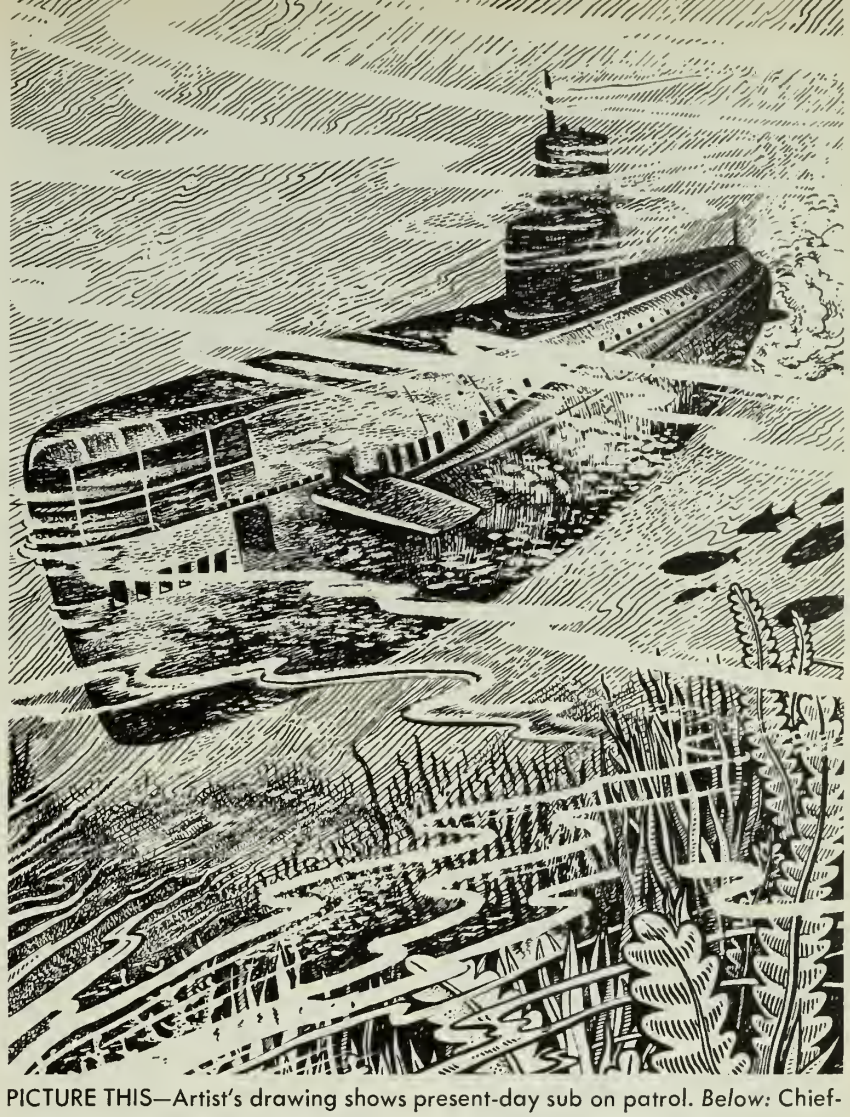
"Another thing that made me want submarine duty was a talk that CAPT Slade Cutter (now the Academy's athletic director) gave about the job submarines were doing in the war. It made quite an impression on me."

Service

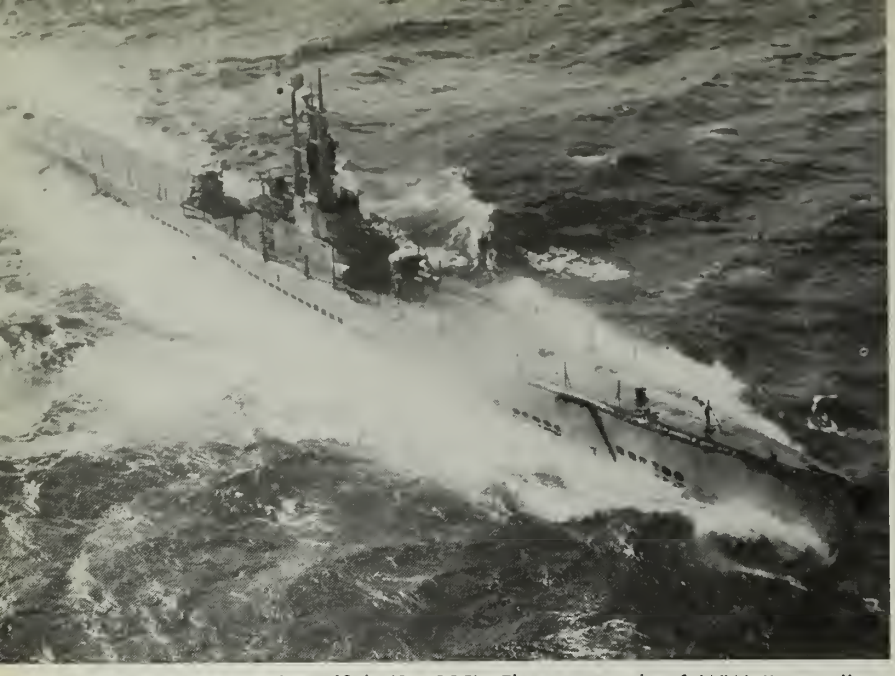
As YOU CAN SEE, there is no set pattern to the submariner's motivation. No matter what his reasons for volunteering are, nor how much he wants to become a submariner, it takes more than motivation to make him a good one.

The eligibility requirements for initial enlisted submarine training reflect some of the traits the Navy looks for in would-be undersea sailor.

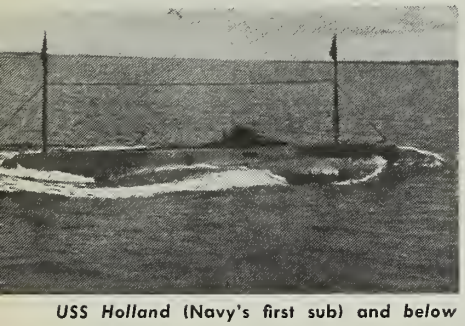
- He doesn't have to be a mental giant, but he has to be on the ball. He should have a minimum combined ARI and MAT, ARI and MECH or GCT and ARI score of 100. However, waivers of this requirement are granted if the man is a good prospect otherwise.
- He must be in good physical shape.
- He must be mature and mentally and emotionally stable. One of the main points in the judgment of these traits is the man's service record, since a poor record often indicates that he lacks these qualities.
- He should have stamina and flexibility. Although these characteristics are usually associated with youth, youth alone doesn't indicate that a man possesses them. But if a man over 30 puts in a request for initial submarine training, his CO's endorsement must include comment as to the way the man stacks up in respect to stamina and flexibility.



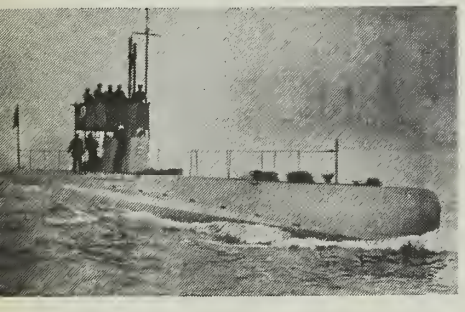
PICTURE THIS—Artist's drawing shows present-day sub on patrol. *Below:* Chief-of-the-Boat mans diving controls to take *USS Sea Owl* (SS 405) down under.



SUB HERITAGE—*USS Redfish* (SS 395), Fleet-type sub of WW II is still in service. *Rt:* Simulator trains sub men.



USS Holland (Navy's first sub) and *below* *USS Salmon*, later renamed D-3, are shown.



MANY NAVYMEN can meet these requirements, but it takes training, along with the right characteristics, to make submariners of them.

They get that at the Naval Submarine School in New London, where both officers and enlisted men really get started on the way to becoming submariners.

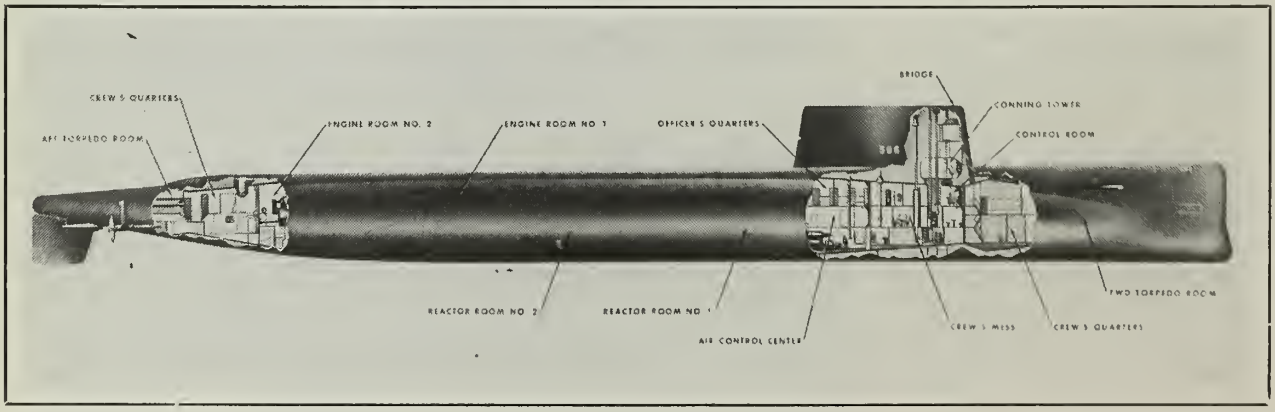
The basic course for enlisted men lasts eight weeks. During that time the embryo submariner gets his general indoctrination. This covers such subjects as submarine history; torpedoes; methods of escape from a disabled submarine; ballast, trim, air, hydraulic and other systems of a typical submarine; and various emergency procedures. Mock-ups (including a full-size "control room" set up on gimbals so that it goes through all the motions of a real sub) and practice runs in Long Isand Sound help give the student "the feel of things" so that he'll be no stranger to a sub when he first reports to one.

The officer's basic course is longer and even more complicated. It lasts six months and includes diving and surfacing, attack procedures, tactics, shiphandling, electronics, escape procedures, engineering electricity, fire control, sonar and everything else a submarine officer has to know just to get started.

While they are undergoing initial training, the students — whether they're officers or enlisted men — are also being observed for danger signs which might indicate that they aren't quite suitable for submarining.

GRADUATION from the basic course is only the beginning of the submariner's education. Before some

KING-SIZE SUB—Cutaway drawing is of nuclear-powered sub *Triton*, SSR(N) 586. She has already hit the water.



AFTER WW II Fleet-type subs were given new streamlined guppy look. Here, *USS Pickerel* (SS 524) makes way at sea.

of the enlisted students can be assigned to a sub, they need more detailed instruction in the submarine aspects of their ratings. For instance, an electrician's mate who's had all his previous experience in surface ships, requires special training in the workings of a sub's electricial system. (In addition, some of the students go directly from initial training into the nuclear-power school.)

Later, perhaps after the individual has been a qualified submariner for several years, he may go back to school at New London for training designed to keep him abreast of submarine progress. This "post-graduate" training can range from the well known nuclear submarine program to short courses on the intricacies and peculiarities of the latest IC system or torpedo. Or, if he has been away from subs for a while, he may need refresher training.

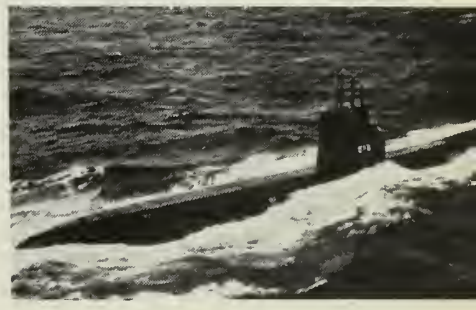
Even after he reports to his first submarine, an officer or enlisted man still has a long way to go before he qualifies as a genuine submariner.

Normally, for the first six or seven months an enlisted man is on board, he's busy studying a variety of manuals and instruction books; sketching the layouts of all the important systems and the locations of valve, gages, switches and the like; taking notes; boning up for monthly examinations; and, generally speaking, learning all he can about the submarine.

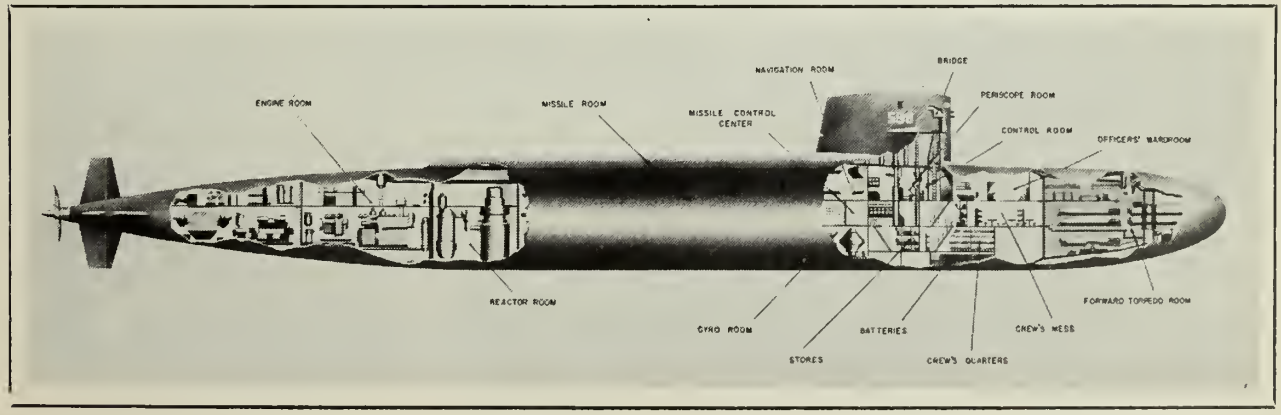
At the end of the seven months he is given a final examination by the Qualification Officer. If he passes that, he finally earns the right to wear dolphins and put an "(SS)" after his name. Usually, he also gets

LATEST style is worn by *USS Skipjack.*

Below: A-powered *USS Seawolf,* poses.



ON THE WAY—Fleet Ballistic Missile submarine George *Washington,* SSB(N) 598, is designed to fire *Polaris.*



ARTIST'S CONCEPTION—*The Secretary of the Navy was recently presented with the original of this painting which appeared not too long ago in* Mechanix Illustrated. *Conceived by Frank Tinsley, it illustrated an article concerning the potentialities of a 10,000-ton submarine 720 feet long with a beam of 124 feet. It would abandon the traditional shape of present-day subs in favor of five cigar-shaped hulls—a sort of underwater-catamaran.*

Combined, they would form a 48-by-300-foot flight deck from which 20 "air rafts" could be launched at one time. It would carry 2240 Marines in addition to the crew, as well as 40 air rafts. These would be twin-engined, "airphibious" flying platforms with a speed of 100 mph.

During an assault the air rafts would rise in a vertical position to the flight deck on their elevators, set down horizontally. As the first rafts take off, each loaded with assault personnel, other would follow. They could land the Marines in seven trips.

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thrown over the side as part of the ceremony that goes along with qualification.

THE OFFICER'S INTERNSHIP normally takes a year. During that time he's rotated from department to department; he qualifies for OOD watches in port and underway; he learns how to dive and surface, how to direct an anchoring, what to do as OOD, Diving Officer or Senior Officer Present during an emergency or casualty; he practices shiphandling, navigation, approaches, attacks, landings and the like; and in between he's learning how everything on the sub operates—from the main engines to the trash ejector. In short, he learns everything there is to know.

At the end of that year the officer is examined by a board, composed of one division commander and the skippers of two submarines other than his own. The exam has three parts. One is an oral or written test. Another is given while underway. And the third part is given in port and on board.

When the officer gets through all this successfully, he is recommended for qualification in submarines and, upon approval by the Chief of Naval Personnel, is finally designated as "Qualified in Submarines."

By the time a man has qualified, he knows not only his own job, but also a great deal about the duties that go along with every billet on board. He's ready to stand any watch that comes his way, and in a pinch, he can fill in just about anywhere. As LCDR Korn puts it:

"In a submarine you hang your specialty mark outside when you come aboard."

ALSO BY THE TIME he's qualified, the individual has become accustomed to the submariner's way of life.

He's gotten used to the idea of seeing nothing but the inside of the ship for days or weeks at a time; he's learned to get along with his shipmates; he's had considerable practice at acey-deucy, checkers, chess, reading or whatever pastime occupies his spare time; he's found room for his gear; he's come to re-

gard a big, perfectly prepared steak dinner as just another meal; he knows exactly where to find the dividing line between grim, business-like efficiency and the spot for a bit of relaxing banter; and he's amused at the outsider's notion that submarine life is like living in a telephone booth with 10 or 12 other people and a St. Bernard dog.

Of course, in the newer subs—and especially the SS(N)s—things aren't quite that crowded. But, as one submariner said:

"They'll come up with something that'll take up all that living space."

Even the oldest sub now in commission is practically a floating palace compared to those the real old-timers knew. Here's how VADM C. B. Momsen, USN (Ret.), described those days at the recent commissioning of USS *Barbel* (SS 580):

"IT WAS NEARLY 38 years ago that I volunteered for submarine duty.

"The captain of USS *Maryland* informed me that 'only the scum of the Navy go to submarines.' I soon found out that there was plenty of scum all right, but it was not in the hearts of those stout submariners that I found in New London.

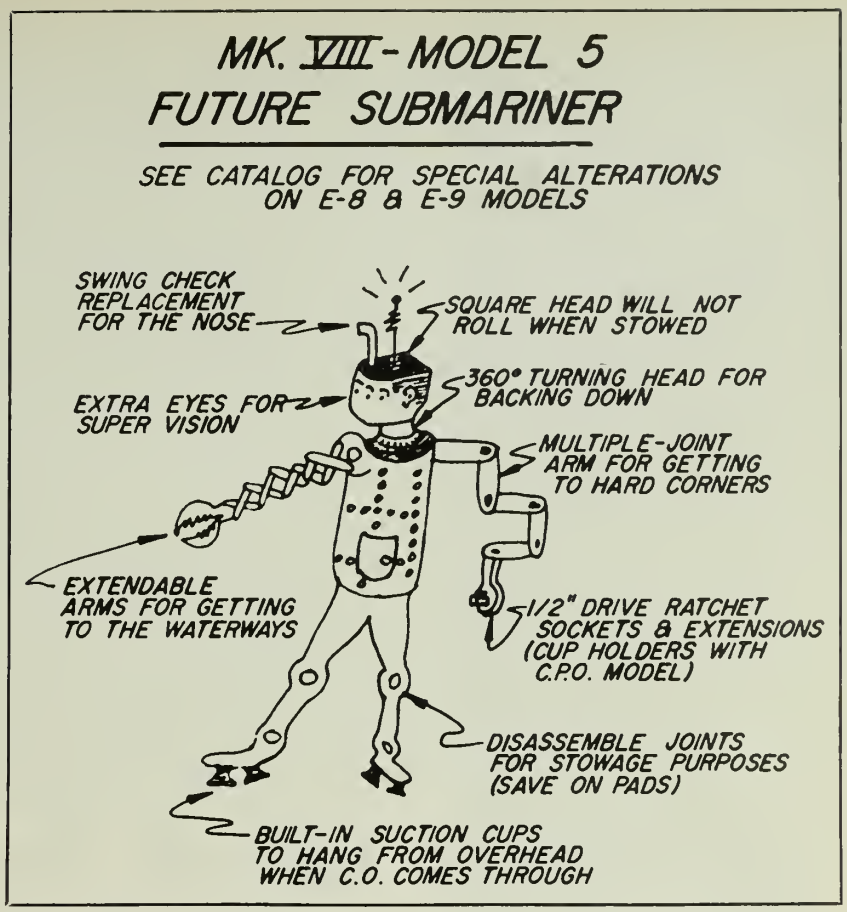
"Words fail me when I try to give a true picture of those early submarines.

"They were slow. They were clammy. They smelled. The engines were rickety. The batteries looked like a Fourth of July sparkler. There was no refrigeration, no bathing facilities, no toilets. Torpedo fire control methods were primitive and navigation facilities were almost nil.

"We submariners started a long hard fight to improve our material. It took seven years to get electric ice boxes . . . It took eight years before we got an angle solver with which to aim torpedoes. It took 14 years to get air-conditioning and 18 years to get a diesel engine that could operate reliably—and 32 years to get a true submarine."

One thing that the modern submariner has in common with the old-timer is esprit de corps. From the time a submariner starts his initial training until his retirement, this rubs off on him.

Despite the fact that the Navy's underwater arm is fairly young, the submariners have a lot of tradition and a fine record—and they make sure the newcomer knows it.



SHADES OF TOMORROW—Crew members of USS Diodon (SS 349) have this conception of future submariner. Drawing is by David R. Whalen, EN2(SS).

THROUGH TRAINING and life on board his sub, the submariner comes to realize that there's no such thing as an unimportant job in a sub. He knows the Navy has done everything possible to make sure he and his shipmates are men who will know what to do in just about any situation they might encounter.

If he's an enlisted man, he knows his officers had to work hard for those gold dolphins and that they know their stuff. If he's an officer, he realizes that the man with the silver dolphins is someone he can count on to do a good job.

In other words, the subman has become one of a group of men that won't ". . . get on each other's nerves, panic in fear, crack under pressure or let each other down."

A submariner adds this post script: "The Silent Service has the best officers and enlisted men in the Navy, and the submarine is the best too." He adds—"If you don't believe me, ask any other submariner."

—Jerry Wolff.

ICE SKATING—Underwater sailors made history in 1958 by sailing under the North Pole. Here, USS Skate SS(N) 578 surfaces through hole in Arctic ice.

USN Frogmen &

WHEN A GUST OF WIND caught the aircraft carrier USS *Franklin D. Roosevelt* (CVA 42), it shoved her seaward from her dockside moorings. The gap that widened between the ship and the pier was just enough to dislodge the after brow and send it toppling into 55 feet of water.

Two men from *FDR*, Ensign Paul Powers and GM2 William Cavanaugh, quietly donned aqualungs and face masks and entered the water. Within 90 minutes the brow was located, lines were secured and cranes had hauled it to the surface. The locators of the elusive brow were Scuba divers.

Scuba diving is the art of swimming under water with the aid of a breathing device. The letters SCUBA stand for Self-Contained Underwater Breathing Appartus. According to undersea explorers, this sport is the most.

The popularity of sport diving continues to grow in almost all parts of the United States and the world. Although many sport divers confine themselves to "skin diving" (without breathing apparatus), additional thousands have acquired self-contained gear and are able to make dives which only professional divers could even consider a few years ago. The Navy's interest is not concerned with the sporting aspect of Scuba diving. It is interested in the mobility factor in that a man can get into this gear, inspect the bottom of a ship and be out of the water faster than a deep sea diver can get into his outfit to do the same job.

THE NAVY TEACHES initial Scuba diving at the Underwater Swimmers School in Key West, Fla. The course is five weeks long, based on a minimum of 30 instructional hours a week. The training includes diving physics, the primary and secondary effects of pressure on the body, accident prevention, safety precautions and first aid. Instruction is provided in the characteristics, maintenance and use of open-circuit, closed-circuit, and semi-closed circuit types of Scuba. Sufficient Scuba diving experience is provided to enable the student to perform safely underwater while going down to a depth of 100 feet or swimming underwater to distances of 1000 yards.

The five-week Scuba diving course is open to officers and warrant officers who are under 40. The age limit for enlisted is 31 and they may be of any rating or pay grade, but should be ratings closely allied to EOD, UDT, or deep sea diving allowance structures. All must be male and volunteers. They must meet the physical and psychological standards outlined in Art. 15-30 of the *BuMed Manual;* must be at least second class swimmers; and must comply with BuPers Inst. 1500.15.

Officer quotas are controlled by BuPers and requests should be submitted to the Chief of Naval Per-

SPLASHY—Frogmen 'drop off' to check harbor in Korea. *Left:* UDT sets blast.

Underseas Disposaleers

sonnel (Pers-B11) via the chain of command. Enlisted quotas for Fleet activities are obtained from COMSERVLANT or Commanding Officer, EPDOPAC; for shore activities, from the Chief of Naval Personnel.

The equipment used in the Scuba training is the open-circuit air demand type. The Aqua-Lung, Scott Hydro-Pak, and Northill Air Lung are used.

THE TERM "SELF-CONTAINED" indicates that the diver carries his breathing medium with him in cylinders and needn't have the worries of becoming entangled with hose connections to the surface. The three types of self-contained apparatus listed above are in present use. Each type of Scuba may include more than one make or model of unit, but the basic principles and characteristics are essentially the same for all units within the type.

• ***Open-circuit Scuba*** is the simplest type and the one most frequently used. The diver has, strapped to his back, cylinders of medium weight which are normally charged with compressed air. A special type of regulator supplies air on demand when he inhales. No rebreathing takes place. The fact that air flows only in response to inhalation requirements helps conserve the supply. Depth limitations and air bottle capacities are the principal drawbacks of open-circuit gear.

• ***Closed-circuit*** units employ pure oxygen as the breathing medium. The diver breathes this gas to and from a rebreathing bag through a canister which contains a carbon dioxide absorbent. No gas is normally exhausted to the surrounding water. Since the body consumes only a small amount of oxygen compared to the total volume of breathing, a relatively small gas supply suffices. Closed-circuit Scuba also has the advantage of freedom from bubbles and noise, important in some tactical applications. The main drawback is the severe safety limitations imposed by the possibility of oxygen poisoning.

• ***Semi-closed-circuit*** Scuba was developed to permit conservation of gas by rebreathing without the necessity of using pure oxygen. The apparatus is along the same lines as closed-circuit Scuba, but a continuous flow of a gas mixture is provided to assure that the oxygen level remains constant. The diver rebreathes the major portion of the gas, but a certain amount is continually exhausted from the system. Much greater durations can be achieved than with open-circuit Scuba, without the danger of oxygen poisoning associated with closed-circuit Scuba. Generally, mixtures of nitrogen and oxygen are used. This can sometimes provide an added advantage by shortening the decompression time required.

ACTIVITIES OTHER THAN the school in Florida have been authorized to conduct limited Scuba training on a "not to interfere" basis. These include: Underwater Demolition Units One and Two, Explosive Ordnance Disposal Units One and Two, U. S. Navy Mine Defense Laboratory; U. S. Naval Submarine Base, New London, Conn.; U. S. Naval Submarine Base, Pearl Harbor; U. S. Naval School, Deep Sea Divers, Washington, D. C., and U. S. Naval School, Explosive Ordnance Disposal, Indian Head, Md.

Ships that have allowances for Scuba and swim suits are AN, ARS, ARSD, ASR, AD, AS, AR, ARG, AV, AM, AMS, AVP, and all types of CVs.

Since the Underwater Swimmer School was commissioned in 1954 it has graduated 200 students a year in the art of Scuba diving. Some end their schooling at this point and return to their ships or stations with increased skills. All are encouraged to enter training for Underwater Demolition Units (UDU) and become frogmen, or join Explosive Ordnance Disposal (EOD) units and become disposal technicians, or specialize within the deep sea diving programs.

Explosive Ordnance Disposal

THE NAVY'S Explosive Ordnance Disposal School at Indian Head, Md., is an outgrowth of the bitter experience of the British at the beginning of World War II, when the Germans, with their huge airpower, began a demoralizing campaign against the British Isles. Many tons of complex mines and bombs were purposely fused to detonate from one to 80 hours after the drop. About five per cent of those not so fuzed, failed to explode. Faced with the urgent need to recover and dispose of these bombs and mines, the British hastily formed the first bomb and Mine Disposal Squads.

American naval officers, attaches in London during the blitz, recognized the pressing need for a similar program in this country. Upon their return they established the Mine Disposal School at the Naval Gun Factory in May of 1941. A Bomb Disposal School, established in December 1941, was next on the agenda. This was moved to the campus of American University in Washington, D. C., in the Fall of 1943. Graduates of these schools ranged over most of the globe, providing detailed information on enemy ordnance and on clearing channels, harbors and captured air fields of mines, dud bombs, and booby traps. In November 1945, the two schools were combined and established at the U. S. Naval Powder Factory, Indian Head, Md.

In 1947, responsibility for EOD training for all services was given to the Navy, and officers and enlisted personnel of all services were added to the staff. Today the U. S. Naval School, Explosive Ordnance Disposal, is located on the grounds of the renamed Naval Propellant Plant at Indian Head, Md. Its new facilities, completed in July of 1958, are among the most modern.

IN ORDER TO GIVE some idea of the subjects covered by the School, let's trace a typical Navy section during its seven-and-a-half month course. The courses taken by the other services are identical, except that the naval EOD trainees are required to study underwater ordnance and diving. As a prerequisite they must be graduates of Scuba training at the Underwater Swimmers School, Key West, Fla.

The first phase of instruction is in the use of conventional diving equipment. This leads to qualification of the trainee as a diver second class. Since the warm, crystal clear waters of Key West are a far cry from conditions which exist in most harbors, diving training is conducted in the muddy Potomac, where visibility is strongly similar to that found on the inside of a cow. Here the student is taught to work without seeing, by the sense of touch alone, while wearing clumsy three-fingered gloves.

After completion of six-week diving phase, there is instruction in certain "basics" which apply to ordnance. This covers the various principles that are used to arm and fire electrical, mechanical and chemical ordnance and many explosive fillers used by other countries. Information is picked up on chemical and bacteriological fillers and the best methods for rendering them harmless.

Next comes practical training at the demolition firing area of Stump Neck Annex, Naval Propellant Plant. Here the student is given a thorough course in demolition with special emphasis placed on safety precautions. This is followed by a course in EOD tools and methods. Then he goes to a study of the three categories of underwater ordnance: influence mines, contact mines, and torpedoes.

After this, he is required to prove his disposal ability on actual items of ordnance. If the problem is handled improperly, harmless but noisy charges are detonated at a safe distance from the student to let him know that something went wrong.

Upon successful completion of this phase, the trainee combines his diving and underwater ordnance skills and spends the next few days working on mines at the bottom of the Potomac, rendering them safe, floating them, bringing them ashore, and completely stripping them.

AT THIS POINT, he has completed the strictly "Navy" portion of

COOL CATS—Navy divers prepare for cold-water dive under Arctic ice pack during scientific studies conducted from icebreaker *USS Burton Island* (AGB 1).

the course. But training doesn't stop. The remainder of the course is the same for all the other services.

His next step is a study of various-type ordnance which includes land mines and booby traps, projectiles of all sizes and shapes such as rockets, and grenades. The diversity and complexity is almost beyond belief. A single subject of the several taught under surface-type ordnance covers everything from Civil War cannonballs to the latest artillery projectile of all the services, in addition to all similar ordnance of foreign nations.

The EOD student next studies "dropped" munitions. Bombs and pyrotechnics of all types as well as their fuzing are taught here. These include the familiar mechanical fuze, and fuzes that operate on almost every source of power that can be crammed into the small space available. Proximity fuzes are also taught. This course is again complemented by practical work at Stump Neck, followed by the study of guided missiles. All U.S. and many foreign missiles are taught together with their intricate fuzing, and their maze-like propulsion systems.

Then the trainee is introduced to a field which is not generally associated with ordance. This has to do with explosive hazards found in aircraft, such as ejection seats and explosive bomb releases. To provide practical training in this subject, the school has acquired a complete jet fighter. Following the study of explosive hazards and safe methods comes the study of photography, and how to recover buried ordnance. This is officially designated "Access and Recovery" and nicknamed "Riggin' and Diggin'."

The next step requires actual surface EOD work, and the student is sent to Eglin AFB in Florida where he works on live ordnance under field conditions. The bombs are dropped specifically for the students by the Air Force. This is actual EOD work with standard ordnance performed under the close supervision of instructors TAD from the school, who are responsible for practical demolition training.

UPON RETURN from his surface stint, the student goes to the Special Weapons building. Here he is given an intensive course in the intricate procedures for rendering dangerous nuclear weapons safe.

CLEARING THE WAY—Navy frogmen prepare to blow obstacles from beach to make way for an amphibious landing of troops during training exercises.

At the end of 31 weeks, the course is completed. The new EOD personnel are sent by their various services to field positions. Since frequent refresher courses are required, they will return, sooner or later, to the school for the latest EOD information available.

Students must all be volunteers, whatever their service. Standards are high. Trainees may be dropped for "inaptitude" for EOD work because of lack of mechanical ability or nervousness in handling explosives.

Here the most damning comment an instructor can make concerning a student's suitability for EOD work is, "I would not care to work with this man in the field."

Graduates of the EOD School are spread throughout the services. Naval personnel are sent to minesweepers, carriers, ammunition depots, harbor defense units, and to the two EOD units maintained by the Navy in Charleston, S.C., and Pearl Harbor, T.H. Marines are responsible for their own bases.

The Navy's responsibility covers not only its own bases but also any ordnance below the low-tide line.

When the course is completed, all officers and enlisted men, Regular and Reserve on active duty, are eligible to go to the six-week Special Weapons Disposal course. This covers detailed instruction in the recovery, evaluation and disposal of special weapons.

The Navy EOD course is open to both officer and enlisted men, and runs for 25 weeks. All requests for quotas for Navy Explosive Ordnance Disposal and Special Weapons courses should be directed to the Chief of Naval Personnel. All officers and enlisted petty officers of MN, AO, EM, BM, GM, TM and EN ratings, Regular and Reserve, on active duty, who are volunteers and meet the requirements of BuPers Inst. 1500 series are eligible. A Top Secret clearance is required.

For enlisted personnel, GCT of 55 and Mechanical-Electrical or Mechanical of 50 is required. Those

who are not qualified Scuba divers before enrollment must first attend the Underwater Swimmers School in Key West. Officers must sign an agreement not to resign during the course and to remain on active duty for 18 months after graduation.

UDT personnel assigned the SPC 9954 and who are qualified second class and Scuba divers will be authorized to enroll in the Navy Basic EOD Course at the U.S. Naval Explosive Ordnance Disposal School three weeks after the convening of each class.

Underwater Demolition Teams

ONE OF WORLD WAR II's best-kept secrets was the existence of Navy Underwater Demolition Teams —the famous "frogmen" who etched their page in history all over the world, most effectively, perhaps, in the sign that greeted the first wave of troops at a Pacific island:

Welcome to Guam, U.S. Marines, USO two blocks to the right.
—Underwater Demolition Team Four.

The Navy is responsible in joint operations for the destruction or removal of all man-made or natural obstacles, underwater or to seaward at the high-water mark, that interfere with the beaching of landing craft. To accomplish this, to reconnoiter the beaches, and to obtain information vital to the landing, the Advance Force Commander creates an underwater demolition group. The normal technique is to employ groups of swimmers who place and detonate demolition charges against the obstacles.

During World War II, Hitler boasted that his forces would repel any assault on his "Atlantic Wall" in exactly nine hours. Shoring up that Wall were complex minefields which extended from Norway to Spain. As a preliminary to the Normandy landings in June 1944, the Allies conducted intensive minesweeps.

Into action went the famous UDTs (Underwater Demolition Teams) which had their origin in the amphibious (Tarawa) campaigns of the Pacific. The task of clearing underwater obstacles and mines by demolition charges carried in and planted by swimmers was a Homeric endeavor calling for the utmost in courage and skill.

In their mineclearing exploits, the American UDTs performed some of the greatest feats of the war. Leading the first wave at Utah Beach, they cleared wide passages for the assault forces. At Omaha Beach, fighting through a maze of snares and traps, they were able to slash only a narrow passage. In this action they lost almost half of their forces.

WHY DOES ANY MAN put in for this type of duty?

The answer, "We like it!" comes screaming from the throats of mud-caked UDT men during their third week of training. This period of training is aptly called Hell Week.

From dawn to dusk, dusk to dawn, for 16 weeks they undergo training designed to test human endurance. During that third week there is one day where they meet physical and mental tests that bring them to the near-breaking point. Mud becomes their home and explosions fill the air they breathe.

They climb into small inflatable boats, move out into the surf—the rougher the better—and wait until they are dunked. This tests and sharpens their skills for the time when such a spill could mean disaster. They're well protected. Their uniform consists of dungarees, kapok lifejacket and a baseball hat.

Sometimes the hat is replaced by a steel helmet. This usually happens when they crawl on their stomachs over sand and through half-buried tires. Then, when they least expect it, small demolition charges are exploded which send blossoms of sand into the air and cover them like rain.

In teams, the men lie down on the beach—but not to rest. Teamwork is all-important and one of the tests includes raising a heavy log higher and higher until it seems as though their arms will fall off.

There's a journey through the mud flats. They sit down in this

mud, link themselves together and form human "boats."

Then they race other human boats. They work their way through gobs of mud until they become half buried in it. Mud quickly finds a way of plugging up the nostrils and breathing becomes a difficult and sometimes desperate burden.

The day and Hell Week ends with the men miserable, mud-covered and exhausted. That's when they pull themselves up out of the mud and give out with their call. Some 25 per cent fail to get beyond this point.

AFTER GRADUATION from the U.S. Naval Amphibious School, men are assigned to teams for regular duty and are embarked in APDs for training afloat. This period generally is of the nature of an amphibious force operation, conducted under combat conditions. During their first taste of this type of operation, the newly finned frogmen swim alongside veteran team members.

Each UDT is a commissioned unit. It is self-sustaining in that it conducts its own supply, medical, communications and other administrative and operational functions in a manner similar to that of a naval vessel. Essentially, however, it is a combat team, highly trained to carry out specific missions of a pre-assault or assault nature. Thorough training and careful screening have made it possible for men of all ranks to execute the most difficult assignments.

Reconnoitering enemy shores, whether located in frigid polar regions or in shark-infested tropical waters, is the primary mission of the Navy's Underwater Demolition Teams. But whether this phase of their work or any of a half-dozen other hair-raising tasks they perform is more hazardous, would be difficult to decide.

Beach reconnaissance is only one phase of the work performed by UDT personnel. After a beach has been scouted by UDT men, and before the assault landings, these highly skilled swimmers swim back into the beach area lugging heavy packs of TNT and other explosives. Charges are skillfully fastened to both man-made and natural obstacles, with time delay fuzes attached to a main trunk-line. When the charges have been planted, all swimmers except two leave the area and are picked up by speeding boats.

EMERGENCY RATIONS—Navy UDT instructor shows student frogman how two can use one aqualung in an emergency at a training session for divers.

The two fuze-pullers, on a signal, ignite the trunk-line fuzes and swim furiously for the recovery boat. Shortly after they are yanked out of the water the beach erupts with an ear-shattering roar.

AFTER BLASTING a lane to the beach, the frogmen continue their work of clearing the beach area, improving landing points, blasting waterways through channels, and demolishing objects which may impede the landing operation.

Underwater Demolition Team personnel, both officer and enlisted, are all volunteers. And they must have a specific and valid reason for requesting UDT duty. Individuals who can give only vague, indefinite, or general reasons for volunteering are not wanted. Those who simply desire a change of duty or the incentive pay, or who are chronic mast offenders, "prima donnas," or antisocial, cannot be accepted.

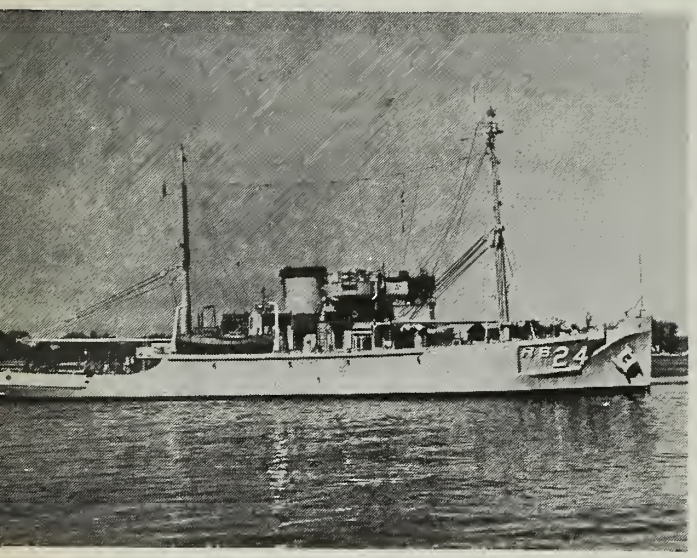
If you think you'd like this type of duty, check over the requirements outlined in Art. C-7406 of the *BuPers Manual*. You'll find you must:

- Be physically qualified in accordance with the *Manual of the Medical Department* requirements.
- Be able to swim easily a distance of 300 yards in less than 15 minutes using at least three distinct strokes, such as crawl, back, side and breast.
- Possess an education of at least two years of high school or the equivalent.
- Be not over 30 years of age at time of assignment.
- Have no fear of the water.

If you are accepted for this type of training, you'll be headed for duty with either the Naval Amphibious Base, Little Creek, Va., or the Naval Amphibious Base, Coronado, Calif. And you'll be seeing some of the interesting sights of the underseas world. —Thomas Wholey, JOC, USN

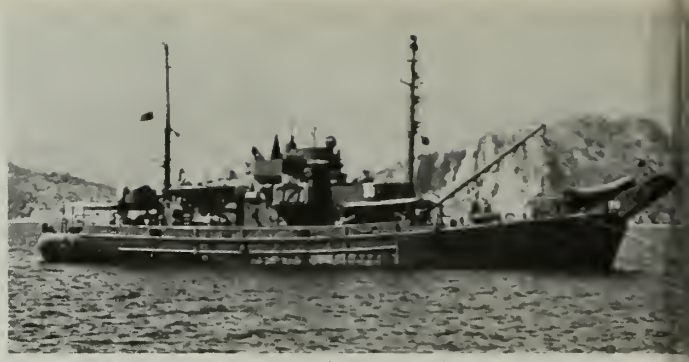
OFF YOU GO—Frogmen go from water into speeding boat demonstrating slingshot technique of pick-up and return after mission on beach is finished.

ASR—Submarine Rescue Vessel *(USS Chanticleer)*



ARS—Salvage Ship *(USS Grasp)*

Below: AR—Repair Ship *(USS Vulcan)*



AN—Net Laying Ship *(USS Elder)*

Sure, These Ships

WHEN IT COMES to underwater work—ship salvage, submarine rescue, search and recovery, inspection and repairs—the Navy's Operating Forces are divided into "diving type" and "non-diving type" ships.

The different types of ships pictured here are the Navy's "diving type" ships. There are more than 110 rescue, salvage, repair ships and tenders in commission today. Each of these ships has a specific mission which requires it to conduct deep sea diving or underwater salvage operations.

All "diving type" ships have an allowance for qualified diving personnel and carry deep sea, lightweight or Scuba diving equipment aboard.

The Navy's "non-diving type" ships are those combatant or auxiliary ships that require the capabilities of shallow-water diving for damage control or investigative purposes. All non-diving type ships have an allowance for one lightweight diving outfit (LWT Special) but do not have an allowance for qualified diving personnel.

Ship Salvage—Raising sunken ships or repairing damaged ones is one of the most important applications of diving in the Navy today. Present-day ship salvage work is a specialized job which can put to use most types of diving equipment and almost every special skill a diver can have. It can require the use of pneumatic tools, use of explosives, underwater cutting and welding, and other techniques as well as the specific know-how of salvage work itself. The underwater phases of ship salvage usually consist of repairing damaged ships, raising sunken ships, refloating grounded ships and clearing harbors.

Submarine Rescue—Each submarine squadron has a submarine rescue ship (ASR) fully equipped, trained and ready to go to the aid of a submarine in distress. Each carries a submarine rescue chamber (see page 29)

ARG—Internal Combustion Engine Repair Ship *(USS Luzon)*

ATF—Fleet Ocean Tug *(USS Seneca)*

Are Diving Types

and is prepared to perform all kinds of diving. ASRs are the only ships in the Navy equipped for helium-oxygen diving. In addition to conducting repeated drills and periodic simulated rescue exercises to maintain a high degree of training and readiness, the ASRs provide many useful services, diving and other, to the Fleet.

Search and Recovery—Practice torpedoes and many other objects must often be located and recovered. All types of underwater search are tedious and time-consuming unless the location is accurately known and the underwater visibility exceptionally good. Even though the use of drags, sonar gear or electromagnetic detection equipment is often more effective in search than diving, a diver usually must verify the contact. Where these methods cannot be used, searching becomes wholly the diver's job. Once the object is located, a diver usually must rig the means of raising it.

Inspection and Repairs—All types of diving equipment can be utilized for inspection and repairs. Diving inspections are usually conducted more easily and efficiently with Scuba equipment because of the diver's mobility. Divers are usually sent down to inspect a ship's bottom for suspected damage, leakage, routine checks of sonar equipment and sea suction troubles. In time of war, divers often are required to inspect a ship's hull for underwater ordnance.

Much repair work on underwater parts of ships or other floating equipment can be accomplished by the use of divers, thus eliminating the expense and loss of time necessary for drydocking.

The pictures on these pages show all the "diving type" ships in the Navy except the ASRD.

The only other member missing from this group is the divingest one of them all—the submarine—which, incidentally, is in the "non-diving type" category.

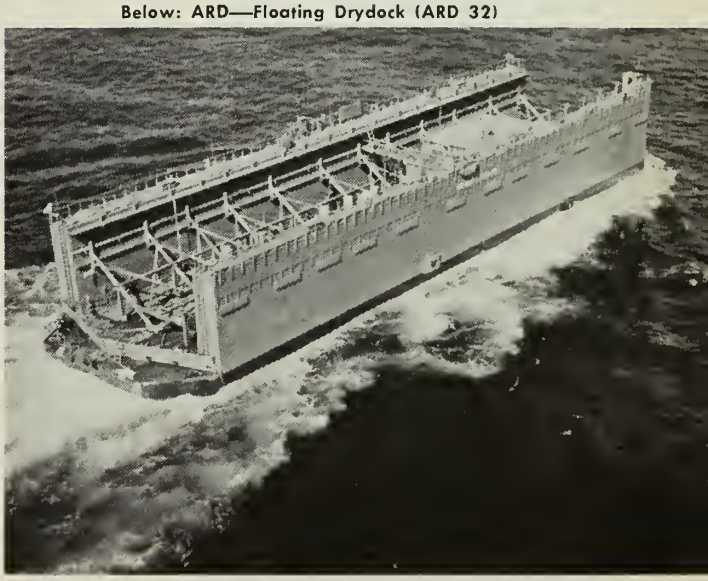
—H. George Baker, JOC, USN.

AS—Submarine Tender *(USS Orion)*

AV—Seaplane Tender *(USS Kenneth Whiting)*

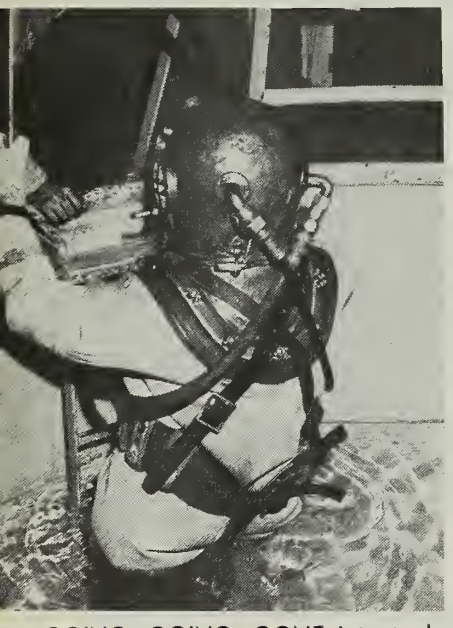
AD—Destroyer Tender *(USS Shenandoah)*

Below: ARD—Floating Drydock (ARD 32)



Do-It-Yourself

DRESSERS HELP prepare for dive.



GOING, GOING, GONE into tank.

When we finished some of the different reports in this issue on the various types of underseas Navymen, we were perplexed. We decided the personal touch was lacking—so we figured one of us might go down and see just what it was like—say, by making a descent in full diving gear.

How did it feel to wear that heavy helmet, the belt of lead, the size-20 shoes? Was all this gear necessary? Why? What was dangerous about diving? Or, was it dangerous? Was it difficult to walk, or to work, underwater? Why was an hour the limit of a dive? How did you breathe? Why were two hoses always attached to the helmet? Or were there two hoses?

We had learned through experience that those thoroughly familiar with their job had, as a rule, difficulty in explaining to a layman just what it was like. It was so routine—to them—that they were inclined to overlook the obvious and interesting parts. If a writer knew his business he would recognize the more significant portions and be able to present them in an interesting—more or less—manner, without resorting to technical jargon.

So our news editor volunteered to tell us what it was like to make a dive. This is his report.

LET'S FIRST set the scene.

When the Diving School was built in its present location back in 1943, the four diving tanks were erected, then the rest of the structure fitted around them. Two are pressure tanks with a maximum working depth of 788 feet, although the deepest any man has descended in them is 561 feet. Connected to each pressure tank is a recompression chamber. (There are also other, similar tanks used by the Experimental Diving Unit, located in the same building.)

The other two School tanks are open, used for more elementary training. They are 10 feet in diameter and some 12 feet high. However, for purposes of instruction, only 10 feet, or some 6000 (more or less) gallons of water are run into them.

The open tanks extend from the first to the second floor. At eye level into the wall of the tank on the ground floor are four sizable portholes so that the instructor and other students can watch what is happening within. At one porthole is a "telephone" (officially, a diving amplifier) which connects to the helmet of the man in the tank. The interior of the tank itself is brightly lighted by four underwater lights.

Above, the top of the tank is flush with the floor and is surrounded by a railing, loaded with gear and hoses, each item in its proper place. Near the opening in the railing is a heavy wooden stool on which the diver sits while getting dressed. There is a ladder leading down to the bottom of the tank and, on the bottom, is a metal framework of a table.

Two dressers help each man prepare for a dive but the role of a dresser is not, by any means, a menial one. He is an experienced diver himself and it is quite possible that, tomorrow, he will be the diver and today's diver will be helping him to dress.

There is also a diver's tender. This man, usually one of the dressers, must see that the diver receives proper care topside and in the water. He maintains contact with the diver by watching his bubbles and tending his lifeline and air hose. He is not, under any circumstances, to be distracted from his duty. He, too, is a qualified diver and this duty is also rotated.

THE SUN WAS SHINING BRIGHTLY and the building was warm, but that made no difference. I had to strip down to my underwear and slip on, first, a suit of diver's underwear, suspiciously similar to extra-heavy-duty sweatshirt and sweat pants. Then a pair of heavy wool socks.

Sweating profusely, I was led to the sturdy wooden stool a pace or so from the ladder which leads to the diving tank. Here, I was introduced by Lieutenant William E. Wise to my dressers J. L. Fuentes, DC1, and F. W. Jackson, BM3, and to James M. Kennedy, FPC, who was to act as my coach.

Fuentes and Jackson had already laid out the gear. First to go on is the suit which, when stretched out flat on the floor, looks as though it were intended for an eight-footer.

Diving

It is made of vulcanized sheet rubber between layers of cotton twill, with about the thickness and flexibility of a new heavy-duty truck inner tube. It has one opening—at the neck. The hands have three slots—one for the thumb and two fingers go in the next. Putting on the suit is routine; much like slipping into a pair of long-johns.

I stood while Fuentes and Jackson laced the back of my legs. Kennedy explained that this is to keep the air out. Without this precaution, I would find myself trying to walk on the horizontal instead of vertically. It didn't make too much sense to me, but I nodded anyway. Might as well go along with the guy. He was supposed to be the expert.

I THEN SAT WHILE a copper breastplate was fitted over the neck of the suit. One kneeling at each side, Fuentes and Jackson guided my feet into the shoes. Mister, those things are big! Designed more for endurance than hiking. The toes are covered with brass caps; the soles are of wood with lead plates riveted to them. Each boot weighs about 18 pounds.

The two of them then grasped the edge of my suit to help me stand so I could force my rubber-shod feet all the way into the boots. Already the outfit was growing a little heavy and unwieldy and, as soon as I put my full weight on one of the shoes, it was like trying to stand on glaze ice. Kennedy advised me to steady myself by hanging onto the shoulders of my still kneeling dressers. After my feet were all the way in, the shoes were laced (with line, not shoelaces), then buckled. Tightly.

Leather straps go around the wrists to hold the hands in place. From here on in, the dressers, assisted by Kennedy, moved fast. Never a wasted movement. The idea here was to get me into the water before I became too exhausted, simply trying to sit or stand up straight with the increasing load of gear on me.

They put a few more gidgets on the breastplate which, so far as I could tell, served as additional washers to help make the joint more waterproof but as I was busy trying to become adjusted to what was going on, wiggling my toes to see if I could and examining my rubber mittens, I wasn't really paying too much attention. Meanwhile, Kennedy was describing the various articles and advising me on their use but I was so busy trying to look nonchalant that I'm afraid I didn't pay much attention. Now that I have to describe the stuff, I wish I had.

EVEN IN TANK'S well lit, clear water, each movement was laborious.

I did pay attention however, when Fuentes and Jackson moved downstage and picked up the belt which, just like every other item of gear, had already been very carefully laid out. I had noticed that fumbling, or wandering about the tank area looking for stray gear while the diver waited, half-dressed, just didn't go. The gear was ready.

THE BELT WAS A solid little number. It was of heavy leather about five inches wide, tastefully studded with lead billets its entire length, with the ends tapering off into straps and buckles. It weighed about 85 pounds and it was a two-man job to lift it and sling it around my waist.

It was while they were passing the two stout leather straps which ran up from the belt and crossed over the breastplate, that I began to doubt the wisdom of the entire venture. If I wasn't round shouldered before I became involved in this scatterbrained idea, I would be now and for the rest of my life. I had to admit the weight was well distributed but there was a lot to be spread around.

"What am I doing here, anyway?"

BATTEN DOWN—Legs of diver's suit are laced up the back to keep air out. Air in legs would cause diver to take a horizontal instead of vertical position.

I asked myself. "Who could care less what the well-dressed diver will wear? If anyone wants to know, let him find out for himself."

I DIDN'T HAVE TIME to follow this line of reasoning to its logical conclusion because Fuentes and Jackson, who were no longer my friends, were tugging at my collar.

I stood up and Kennedy told me to bend over. He had to tell me twice, because I couldn't believe my ears. Bend over in all this hardware? Ridiculous! I did though, with Kennedy steadying me. (I understand this wasn't cricket. I should have been able to do it by myself.) Jackson passed another strap between my legs to Fuentes, who, in turn, passed it through a buckle on the lower edge of the belt, and pulled it up as tight as he could.

"Does it feel uncomfortable?" asked Kennedy with a touch of compassion.

"Not at all. It's fine." Me, always the good sport.

"Bend over, please."

They tightened it two more notches and only desisted because they were afraid of breaking the belt. I was expendable, but good belts are hard to come by.

"You'll be glad it's snug when you get in the water," explained Kennedy. "If this strap were loose, the buoyancy of the suit and helmet would make them rise until the strap —or suit—stops them. If they rise too much, you might have a blowup because you wouldn't be able to reach your chin button."

Blowup? Chin-button? Oh, well. I'd probably find out about them in due time.

"By the way, try to sit up straight. If you continued to sit slouched over the way you are now, the weight will tire your back."

So what was supposed to get tired if I sat up straight? I had my mouth open to make a remark of this nature when they dropped the helmet over my head. A cozy little item. They started with the faceplate about four points off the port quarter, then both of them leaned on it to give it a good twist forward. Since I had no warning, they took my shoulders along with it.

THEY RESTED from their labors while Kennedy took over. You could see him trying to select words which even a simple-minded child could understand as he tried to explain the function of the various gadgets on the helmet.

"This valve on the right side of your helmet is the exhaust," he said, speaking slowly and distinctly. "It is set at ½ pound pressure and, under normal circumstances, there should be no reason for you to adjust it. You'll notice a small brass plate in the vicinity of your chin on your right. It is also a part of the exhaust valve. It's called a chin button. If you have any reason to exhaust the air in your suit, just give it a bop with your chin, or cheek, or whatever. As long as you hold it down, it will let the air out. Release it, and the air just continues to escape through the exhaust valve."

Mister, who wants to let air *out*? I like air fine. Lots of it.

"You'll notice that the air hose is lashed to the breastplate of your suit on the left side and conveniently located to your left hand is the valve which controls the amount of air admitted to the suit. Turn it away to cut off the air, turn it to if you need more. All clear? I'm going to turn the air on now."

Did they think I was crazy. Why should I cut off my own air? Would I cut my own throat?

THE AIR MADE a reassuring racket when it started coming in. I looked down to check on the location of the lovely little valve that was going to give me more air and discovered that I had a fine view of the inside of the helmet at a range of some two inches. Tipping the helmet forward to get a better view didn't work because, in order to move the helmet, the breastplate had to move. To move the breastplate, I had to move. If I wanted to look at the valve, I was going to wait until I was out of this straightjacket.

I could visualize difficulties ahead. I lifted my left arm to try to find the valve and discovered that it was real work to make any sort of movement. I fumbled blindly a bit and eventually struck an object which, through my glove, felt as though it might be a valve. I gave it a slight turn and very nearly blew my head off.

It certainly *was* the valve and it was also a good thing that the faceplate was still open or I would have, no doubt, found myself floating on the overhead, minus head. Getting enough air was going to be no problem.

Considering the limited field of vision through the faceplate, which was about three inches in diameter, I couldn't help but wonder how fully armored knights, with only slits in their helmets, ever found anyone to fight. And, if their armor

was at all comparable to the weight and mobility of my outfit, how were they in any position to do any damage if they did locate their opponent?

Now that they had me utterly helpless, my companions in this venture did not look happy.

"Now all I need is a lance and a sword," I observed. This remark did not make them happier. I noticed LT Wise and Chief Kennedy, who was also going to be my talker, exchange uneasy glances.

LT WISE APPROACHED and looked at me closely through the faceplate. I understand that he had agreed to my making a dive but that was before he had seen me. Now, he was having second thoughts about the entire project.

"Are you sure you want to go through with this?" he asked.

"Sure. Why not?"

"No harm done if you change your mind. After all, you've accomplished your main purpose. You've learned how a diver gets dressed."

"I'll suffer," I replied firmly.

"OK," he said, and shut the faceplate. The rush of air increased to a loud roar which stayed with me until, hours later, they finally opened the faceplate. My two friends leaped at me, spun the lock nut down tight then leaned on it with a wrench, giving my head and shoulders a definite list to port.

"Diver No. 1, how do you read me," came from a small mike within the helmet to my left and above me.

"I read you loud and clear."

"I read *you* loud and clear. Carry on, and good luck."

This message from Chief Kennedy was reassuring. At least I couldn't go far wrong. He would be standing at the porthole watching every move I made. If anything were to happen, he could coach me.

I didn't quite dig the "Diver No. 1" routine until I had plenty of time for thought at the bottom of the tank. (At first, I thought he had me confused with someone else who was a Diver, First Class, but that didn't make sense. I finally figured it out that sometimes there were more than one diver on a job. Then they would be Diver No. 1 and Diver No. 2. Since there was only one diver on this project, I could only be Diver No. 1.)

AT THIS POINT one of the dressers gave me a sharp rap on my helmet. No one had bothered to tell me that I was supposed to do next, but it was obvious something was expected of me. Both dressers were tugging at my armpits trying to make me rise, so I decided to go along with them.

Like the old, old, man that I felt, I shuffled the two or three steps to the edge of the tank. The dressers turned me around so that I faced outboard, placed my hands on the ladder—which I couldn't see—and pushed down on my shouldders.

I'm not the type of person who goes charging madly into a situation where I can't see where I'm going—especially in water, which I don't trust anyway, and more especially when I'm so clumsy it takes two strong men to hold me upright. I like to know where I'm putting my feet.

Not this time. I had as little chance of seeing where I put my feet as I did of finding the air valve and for the same reason. With the delicate little ballet slippers I was wearing I'd be lucky to find the bottom of the tank, much less the rungs of the ladder as I descended.

I still don't know how others do it, but in the half-dozen steps it took me to submerge, I learned to kick the wall of the tank, then push my foot down until it wouldn't go any further. Then I would take the other foot off its rung and repeat the process.

I couldn't feel the water when I entered it, but I knew I was getting there because my legs and thighs felt as though they were in a clamp. Now that it had happened to me, I recalled that Kennedy had warned me of it. Nothing to worry about, he said. Perfectly normal.

With my helmet level with the surface of the water, I stopped to think things over. By tipping my head back I could see through the top eyeport the spectators above me.

"What am I doing here?" I asked myself. "How did I get into this mess? Do I want to go through with it?"

I didn't, but it would be easier to go than explain why I didn't. So I took the next step.

If the rush of air was strong before, it was now a torrent. I kept on going down until my feet wouldn't go any further. As soon as I let go of the ladder, I found I couldn't stay on the bottom. I started to float upward.

"This is ridiculous. It's impossible," and then with superb logic, I told myself: "There must be something wrong."

KENNEDY was saying something into the mike but there was so much noise in the helmet, I couldn't hear a word he said. Besides, I was

SHOE ENOUGH—Diver's shoes are big with toes covered with brass caps. They weigh about 18 pounds each laced with line and buckled tightly.

PIPE THIS PROBLEM—Unbolting pipe sections and removing gasket is one of the 'kindergarten' projects used to train divers how to work under water.

busy with problems of my own. It was only at this point that I recalled the gist of Kennedy's coaching concerning the use of the air control valve. With one hand still clutching the ladder, and with my toes and all 350 pounds of me dangling delicately a few inches from the bottom, I fumbled around until I found the valve and ever-so-lightly closed it.

My feet struck bottom with a thud.

Now that his instructions were so vividly brought to my attention, I also recalled that he had told me if I were to let too much air in the suit it would force my arms out to the sides and I couldn't get them down enough to grab that all-important air valve. A fine situation to be in! Then I remembered the chin button and tried hitting it with my cheek. Sure enough, it worked.

I also remembered that, during our earlier tour of the school, LT Wise, when describing various parts of the diving gear, would remark casually, "It took us a couple of men to learn how to do this."

A deep and sincere respect for the men who dived began the moment I hit that chin button and speculated on how many lives it had cost to put it there. This sense of respect was to increase as time went on. It was at this time that I began to wish I had paid more attention to Chief Kennedy's advice, instead of assuming that I could pick it up as I went along.

IT SEEMED RATHER silly just to go down and come right back up again, so I had asked LT Wise to give me one of the more elementary problems worked on by the students.

He obliged by giving me the kindergarten project. On the surface it would appear to be, literally, child's play. It consisted of two pieces of five-inch pipe, each about a foot or 18 inches long. Each had a flange at one end and the flanges were bolted together, with a gasket between the two pieces of pipe.

The problem was simply to take the eight ½-inch bolts out, remove the gasket, send it to the top so the instructor could see that you really had taken the pipe apart, then insert the gasket and bolt the two pieces together again. Finish the job in 10 minutes and you rated a 4.0; 20 minutes, and you were good for a 3.5. How elementary could you get?

My problem was lying at my feet, and beside it was a small canvas bag containing the two wrenches.

Walking was simple but kneeling down was something else again. I had the same difficulty I encountered when I tried to stay on the bottom. However, one learns from experience and it only took me five minutes or so to adjust the air valve enough to permit me to bend over and then kneel beside the pipe on the bottom.

I'm not sure of the reason, but I did discover that each movement was exceedingly laborious and that it required a positive mental effort to make any gross movement. This I found true all the time I was below and it appeared to increase as time went on. I had to tell myself, for example, there's the bag; reach over and get it. Stretch out your arm. Now pull it to you.

As soon as I did so, it disappeared from my range of vision, which meant that I had to reason out that I must either move the hand holding the bag up to my eyes, or move the helmet which, in turn, meant moving all of me.

As soon as I had solved the basic problem of removing the wrenches from the bag, I attacked the pipe. Here again, it wasn't as simple as it sounds. As soon as I managed to get a wrench in either hand, the pipe rolled away from me. It took no time at all to figure out that I had to wedge it up against my knees which were, by the way, already becoming tired from kneeling. At no time did it ever occur to me to simplify the whole thing by putting the pipe up on the table, even though I kept bumping into it. Don't ask me why.

THE NUT STARTED easily enough so that I could run it most of the way with my fingers but I couldn't help but appreciate that it would be a much different story if it had been rusted together for a few years and if I were working in a tight spot with, perhaps, no room to get a wrench on it. With the nut almost off the bolt, I faced another decision.

If I laid the wrenches down, would I be able to pick them up again? Ever try to pick up a penny while you were wearing a pair of mittens? Or even a quarter? If I were working out in the Anacostia River where the advanced work was done, I knew I couldn't lay down the wrenches because I could never find them again in the gooey mud.

This line of reasoning was no good, because I *wasn't* in the river and besides, whoever had earlier worked this problem in the tank must have done something with his wrenches. I dropped the wrenches on the bottom.

I presume I could have done the same with the nut and bolt but somewhere along the line I had grasped the idea that it wouldn't

be proper. You were supposed to put them in the bag.

An excellent idea but I couldn't find the bag. It wasn't directly in front of me so it was invisible. It would do no good to pat around with my hand because even if I did find it, I wouldn't feel it. I must have looked pretty silly crawling around on my hands and knees with my head bobbing from side to side, but that was the way it was done.

This time, when I found it, I played smart and slipped the bag over my arm. To put the nut and bolt in it, it was necessary to raise the bag to the level of my eyes, then open the mouth of the bag, then drop them in. After the first one, it occurred to me that it might be wise to run the nut on the bolt so it would be necessary to find only one object in the bag when it came time to put the pipe together—if it ever did.

I also discovered that either Chief Kennedy or LT Wise had cheated for me by not running the nuts on tight enough to require a wrench to start them. A good thing, too.

THE EIGHTH BOLT represented a major triumph. All sense of time had long been lost and, so far as I was concerned, I had spent years kneeling on that floor, with a field of vision of about 18 inches, fighting with those stubborn bolts. Kennedy had fussed at me from time to time but only once could I hear what he said. This time he was asking, "Diver No. 1, are you all right?"

This was at a time when I had been kneeling for a long time and —from his point of view as I happened to be facing directly away from him—quite immobile. He must have thought I had gone to sleep. Somewhat irritably I had replied: "Sure, I'm all right. Why shouldn't I be?"

"I think you had better stand up for a minute," he suggested. "Rest your back."

The slight difference in depth from kneeling to standing meant a change in pressure which meant, again, difficulty in moving my arms. Again, a bang on that lovely chin button solved the problem.

All the rest of the time I was below I could hear Chief Kennedy making an occasional remark, but to me it was simply a bunch of static coming in with the air. If I hadn't been so concerned about taking that pipe apart and putting it together again, I would have figured out that other divers — pardon me, gentlemen, *real* divers—must have encountered this problem and that there was a solution. I might even have figured out the answer. (The answer is embarrassingly simple—turn off the air. You have about seven minutes' supply in your suit. Now you know, if you ever have occasion to make a dive.)

I like to think I'm not normally so stupid, but it was only after I had unbolted the two pieces of pipe that I realized: (1) I couldn't remove the gasket because the rope they had used to drop the pipe was still running through the pipe; and (2) Even if I did get the gasket out, I couldn't send it topside because I had no line for it.

IT BEGAN TO LOOK as though they had never expected me to get the gasket out in the first place. Or perhaps that was the second grade problem.

Just to show that I had, at least, freed the gasket I pulled it out as far as it would go and showed it to LT Wise, who had been nervously watching my sterling performance through a porthole. He nodded acknowledgement but didn't seem terribly impressed.

Now, I was on the home stretch. The first bolt wasn't bad. The second followed, eventually. By this time, I was going slower and slower, and each movement required a positive effort. My thumbs were aching from fighting against the heavy rubber of my gloves. Whatever I had for lunch, hours and hours ago, was beginning not to agree with me.

The first two bolts I had put into adjacent holes. For some inexplicable reason I decided to put the third on the opposite side of the pipe. For a long, long time the pipe and I wrestled with each other before I could convince it to make half a turn, and then lay still.

Then I couldn't get the hole in the gasket to line up. If I could have laid down and cried, I would have done so. I had already rationalized myself into abandoning the whole thing but I was determined to get this last bolt in.

It went, eventually, but not before I had time to pay my respects to the students who had preceded me. I was having trouble here in a brightly lighted, clean tank, with plenty of assistance standing by if I were to need it, working on the simplest manual problem possible.

Visualize, if you can, working in total darkness (as soon as you descend below the surface of the Anacostia, you may as well be blind), cold, lying in several feet of mud (it is probably completely covering you, but you wouldn't know it),

SCHOOL DAZE—Aqueous school room, where each simple movement had to be thought out, and bulky gear made a routine surface job a tough problem.

the current trying to sweep you and your tools and work downstream, on your back attempting to bolt a half-inch steel plate approximately 18 inches in diameter into place after you have inserted a gasket around the opening. When you have finished, it has to be watertight. And then, says LT Wise "You're not necessarily a diver after you finish with the school. But you may have learned enough for you to begin to be one."

Very well, sir. This is not my field.

IT WAS A VERY TIRED individual who finally straightened up. I was groggy enough to be stubborn, and I had recalled that one was supposed to bring the tool bag up with him, so this meant more searching before I found it. It was still on my arm.

Then I remembered that LT Wise had described how, through careful adjustment of the air, it was possible for a diver to hover deliberately just off the bottom. I had done it before, but not on purpose. Very well. I had to try that—and it worked. I also apologized to my dressers for my flip remarks about 86 pounds of lead floating up around my armpits. Whatever they said went, from here on in.

I could also see why the strapping up of the legs made good sense and I could see why it would be inadvisable to try to do a handstand in a diving suit.

I had one more thing to learn. Coming up the ladder underwater was fine. Again, the change in air pressure made the suit a little awkward to handle but I was in no mood for the niceties of the trade. I just wanted to get out of there so I could sit down and rest and, come to think of it, draw a breath of fresh air. Suddenly I was dying of thirst and had been all the while I had been below.

THE MORE I CAME OUT of the water, the heavier the suit grew. So far as I was concerned, it took half an hour for each step. It was a matter of plotting very carefully the mechanics of taking a step upward, of mustering all my strength into the poor, tired leg that was going to do the lifting and then telling that leg to move. Mister, I never worked so hard.

Again, LT Wise had given me good advice which I had ignored.

"Coming up may be a little difficult," he had said. ("A little difficult" indeed!) "But like everything else, there's a sort of trick to it. If you bend your arms so as to keep your body close to the ladder, you'll be putting too much weight on them.

"But don't straighten them all the way or you'll be leaning too far backward. Bend them just a little. Once you start coming up, swing your body from side to side a bit. It will help you make the next step. And, whatever you do, don't stop to rest. If you do, you're whipped. You won't be able to start again."

He should talk! I was stopping to rest at every step, and glad of it.

When my head came up over the rim of the tank, I could see my dressers waiting for me and as soon as my arms were within reach, they latched onto them and tried to help me up. It was a nice gesture but didn't help much. It was my legs that had to do the work and they weren't doing so well.

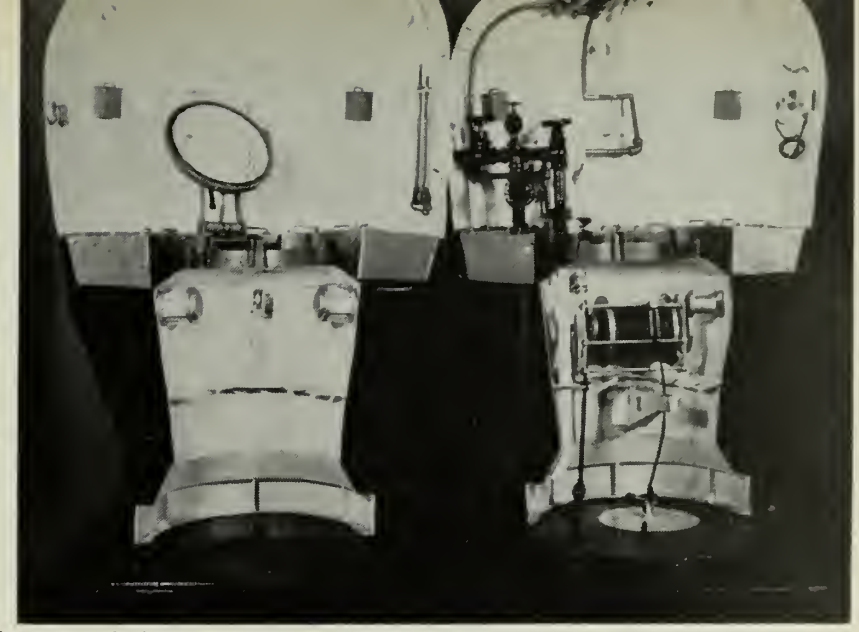
I have an indistinct recollection of Jackson trying to relieve me of my wrench bag but I had one major problem to whip before I dared let go the ladder on his side.

Around the rim of the tank there is a four-inch steel coaming. I can't imagine what purpose it serves, other than to trip tired divers. I could feel it with the end of my boot but I could not, under any circumstances, lift my foot over it. This was the end of the line, and as far as I was going.

Since I'm not still standing at the edge of the tank at the present moment I presume I must have gotten over it somehow. Fuentes and Jackson walked me the long half-mile to the stool, turned me around and indicated that I should sit down but I wasn't taking any chances. I insisted on taking a look for myself to be sure the stool would be there when I sat. It would be just my luck to miss the stool and go sprawling on the floor.

If I did, I would never have gotten up. But, I made it.

DONE—This is routine way divers are assisted from their heavy work clothes.



THIS WAY OUT—Sub rescue bell is shown on deck of *USS Tringa* (ASR 16) and (right) as a cutaway scale model.

Saved by the Bell

STILL THE MOST spectacular submarine rescue on the books, USS *Falcon* (ASR 2) in 1939 was able to save the lives of 33 crewmen of USS *Squalus* (SS 192) from a depth of 40 fathoms (see pages 59-63). The key to the whole operation was the McCann rescue chamber (or diving bell) developed in the 30's. The Navy maintains a fleet of submarine rescue vessels, each equipped with an improved version of the McCann rescue chamber.

The bell-shaped device has two chambers, upper and lower, separated by an air-and-water-tight hatch. The upper compartment is enclosed; its occupants depend on the ASR's compressors for air, while the lower compartment is open to the sea.

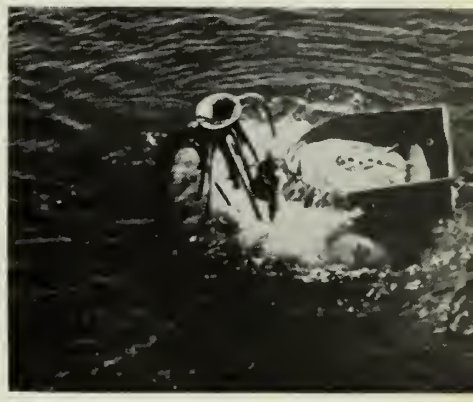
In the lower is an air-powered winch, and along its sides are ballast tanks for taking in and expelling sea water as necessary.

By adjusting valves so that their ballast tanks take in sea water, the chamber's operators regulate the buoyancy of their tear-drop-shaped bell. A cable guides the chamber.

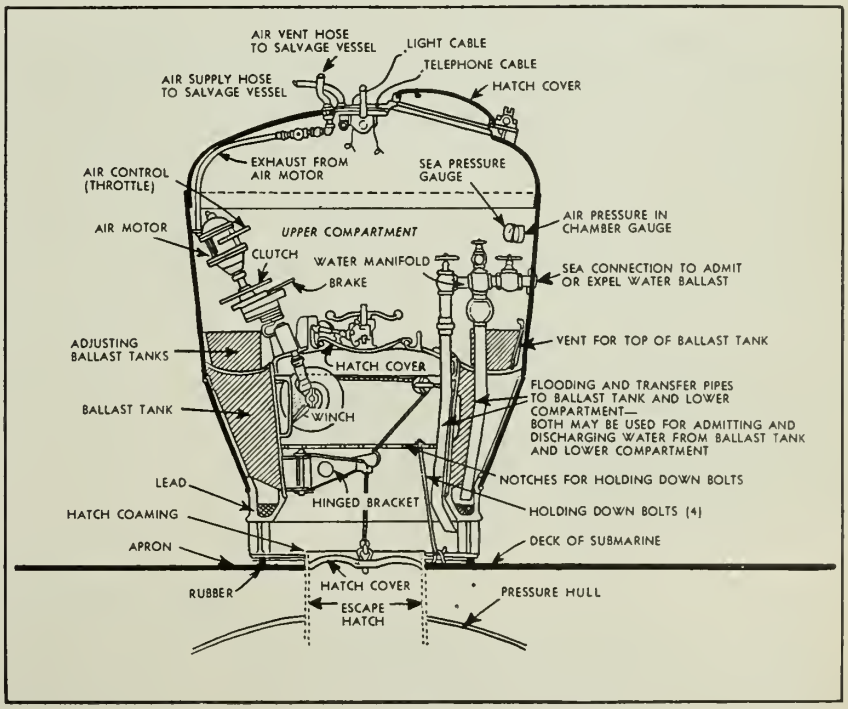
When the chamber rests directly over the sub's escape hatch, the operators flood the ballast tanks to increase its weight and hold it in place. Then, using air pressure, they blow all water from under its skirt and then vent excess air from the lower compartment into the bell. Gravity, plus undersea pressure, keeps it dry and in place.

Now it's up to the humans. One of the bell's operators opens the hatch and drops through into the lower compartment. He clamps and tightens down on four special fittings at the rescue hatch to clamp the bell to the sub.

The rest is simple—relatively. The operator reaches down, opens the submarine hatch, and embarks the men below, seven at a time.



THE WORKS—Artist's drawing *(below)* shows parts of rescue chamber. *Above:* Submarine rescue chamber starts trip to bottom during training exercises.



Meet Navy's Deepest Boat

VISUALIZE if you will, a visit of strange beings from another planet. As the air which we breathe would, they believe, kill them, they are unable to leave their flying saucer. Because of the atmospheric pressure on the face of the earth, their craft can approach the surface no nearer than five or six miles. They are able to determine their distance from the earth only by instruments, for clouds, dirt and moisture prevent them from actually seeing the object of their exploration. Their eyes aren't adapted to air, anyway.

To form *some* idea of what the earth is like, they drop a line overboard and trail it along the ground. It could snag into almost anything and, if it did not become caught on a good-sized rock it might, perhaps, be pulled back into the craft with a branch of a tree and a few leaves stuck to it. Our mysterious beings would examine it carefully and conclude that the area over which they were traveling was capable of supporting some kind of vegetation.

Then they would go on a few miles and repeat the process. This they might just possible snatch from the clothesline of some indignant housewife a few intimate items she had hung out to dry. Or a haystack of some furious farmer might suddenly rise out of sight in the sky. With rare good luck they might—just possibly might—snare a slow-moving animal such as a turtle or, pehaps, a human being.

Then they would go home and write a scientific paper on the flora and fauna of the earth. Or perhaps they would conclude there was none.

In abbreviated and somewhat clownish form, this might serve as an account of the state of our exploration of the underwater world.

However, the Navy and ONR now have a craft, *Trieste*, which can actually reach the bottom of our unknown planet—if the bottom isn't too far away.

Trieste is a bathyscaph (derived from two Greek words "bathy" and "scaph" meaning "deep boat") which is the underwater equivalent of a lighter-than-air craft, much like a blimp operating in reverse. Very briefly described, it consists of a 50-foot hull, 12 feet in diameter, filled with gasoline to make it buoyant, since gasoline is lighter than water. Beneath this hull is suspended a sphere 6.5 feet in diameter which holds two men and scientific gear. It is capable of descending with reasonable safety, some three miles.

It is now operating out of San Diego, Calif., exploring the ocean depths off the Southern California coast.

The 70-ton diving craft, purchased by ONR from the Swiss scientists Auguste and Jacques Piccard, has been made available to the west coast oceanographers to conduct basic scientific research involving acoustical and biological investigations in the San Diego area.

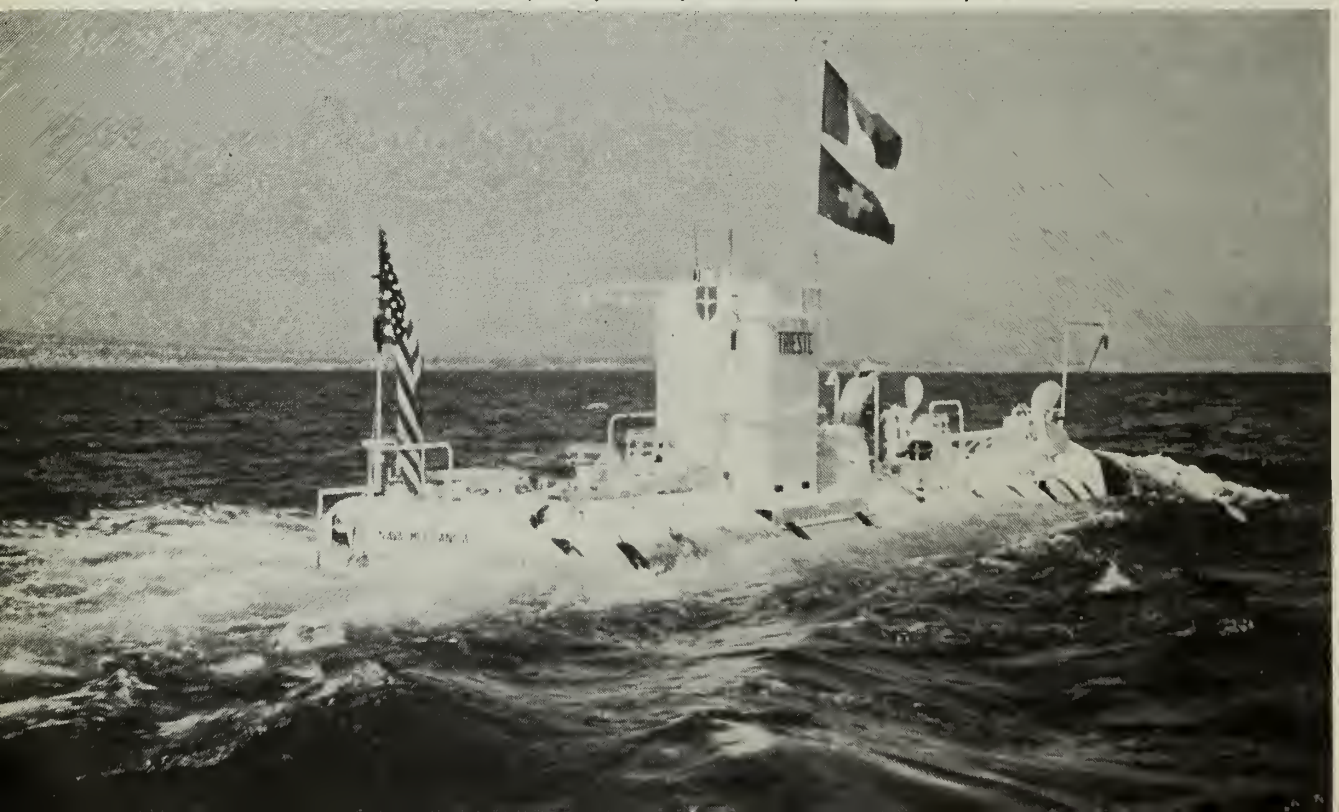
Between June and October of 1956, Navy scientists made a series of 26 dives in the Mediterranean with *Trieste*.

Trieste, constructed with Italian-Swiss collaboration, is the second bathyscaph to be built and designed under the supervision of Professor Piccard. The first, known as FNRS-3, is owned and operated by the French Navy, and has been used off the coast of Japan.

ONR had four good reasons to acquire *Trieste*. It wanted to:

- Investigate the ocean environment at great depths.
- Evaluate the potentialities of the bathyscaph as a research tool.
- Encourage modification and further development of the bathyscaph or similar craft.
- Examine possible naval uses for this type of craft, such as a submarine rescue vessel or a deep-diving submarine and other devices.

LOOK OUT BELOW—*Trieste* now owned by Navy and operated by ONR will help reveal secrets of ocean's floor.



Here are the ways NEL (Navy Electronics Labobratory) oceanographers will use it. They will:

- Make direct observations of the ocean bottom, of bottom currents and organisms, and of the deep scattering layer.
- Study sound propagation and light penetration in the deep sea.
- Explore deep-sea canyons, sea mounts and other underwater features.
- Examine the orientation of sediment samplers, current meters, bottom corers and other gear lowered to the ocean floor from ships.

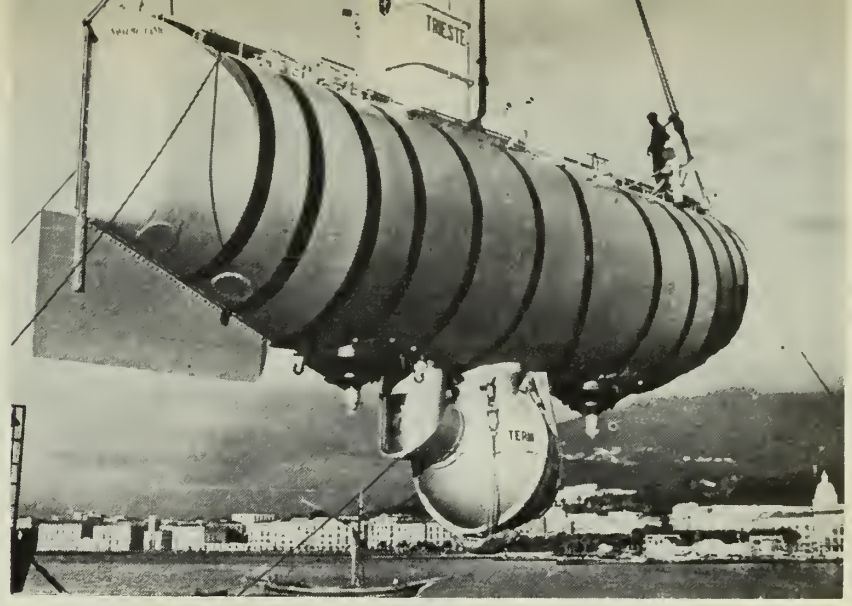
Trieste is not the first of such vessels to be built by Professor Piccard. His experience goes back many years—to the 1930s, when he began work on *Trieste's* prototype, *FRNS-2 (FRNS-1* was a stratosphere balloon).

Although construction was begun before World War II, it was not completed until 1948. The tests which were made off Dakar with the assistance of the French navy, consisted of an unmanned dive to about 4600 feet and a manned dive to 82 feet. Although the dives themselves were successful, the ship was unseaworthy while at the surface, particularly in heavy seas and while being towed. In 1950, *FRNS-2* was turned over to the French navy. The ship's original flotation hull was replaced with a new one capable of withstanding rough water and long tows. At the same time, she was rechristened *FRNS-3*. About 30 dives have been made with *FRNS-3*, one of them in 1954 to a record depth of some 13,000 feet.

Trieste's cabin has two portholes, one looking forward and slightly down, the other aft and upward. The ports are truncated right-angle cones of six-inch plastic, firmly forced into their metal seats by outside pressure. The two portholes give the observers a 90-degree field of vision.

Communications between *Trieste* and the surface are provided by special-purpose 15-watt battery-powered underwater telephones installed by the Navy's Underwater Sound Laboratory. This allows communication between the bathyscaph and the motor launch which always accompanies it. The telephone unit in *Trieste* is constructed in a rectangular box with a cushion on top and is used as a seat.

As a rule, communications were excellent during a descent, on the bottom, and during the ascent, but at shallower depths, with the horizontal range greater than one-half mile, communications were poor. The telephone picked up sounds of noisy fish during the dives. An unexpected dividend was that the release of the ballast could be heard on the telephone and could be checked. Otherwise, it was necessary to turn on the outside lights and watch the ballast drop from the portholes.



ON THE BALL—Gasoline-filled bathyscaph, now operating out of San Diego, can lower its sphere and Navy scientists to a depth as great as three miles.

Generally, the bottom of the ocean area explored was surfaced with a brownish grey mud and indented with numerous holes. These appeared to be about one-quarter inch in diameter and were assumed to be inhabited by animals. On one dive, a large hole about four inches in diameter was photographed. One group of five holes arranged in the manner of a dog's paw was seen. This appeared to be the same formation noticed by observers in other bathyscaph dives. While no occupants of these holes were discovered on the deep dives, a long worm was seen to disappear into one of the holes on an earlier dive.

Among the fish seen were several which appeared to have bodies covered with white down. They had a large brown eye with a blue semicircle behind it and a tail with a V-notch. This variety was seen to swim vigorously for a short distance, and then lie on their sides on the bottom. They appeared to be undisturbed when the ballast was dropped, sending up a cloud of mud.

Most of the bottom fish that live below the penetration of sunlight showed little concern for the strong artificial illumination of the three mercury vapor lamps that lit up the ocean for the observers, although species of isopods accumulated in the light zone by the hundreds.

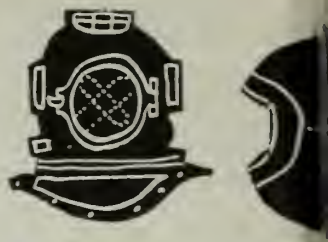
The sea was filled with minute suspended particles, looking like snow. However, there seemed to be no indication of a large population of plankton which may be responsible for the deep scattering layer.

At mid-depths, the noise level differed significantly from that at higher and lower depths. It also appeared that this noise came from a horizontal rather than a vertical direction. No one has figured out an answer to this, yet.

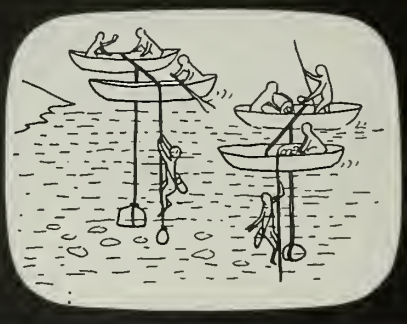
Photographs were taken with a special camera and flash designed and built by the famed Dr. Harold Edgerton. The camera and flash were located about 15 feet from the sphere near the bow where it could photograph objects illuminated by the mercury lamp. The Edgerton camera is capable of taking 800 35-mm exposures at the rate of one every five seconds.

On one dive, the bathyscaph remained submerged for eight hours, making continuous observations. To demonstrate the control possible, Jacques Piccard was able to suspend the bathyscaph 900 feet down from a surface float and maintain equilibrium for three hours.

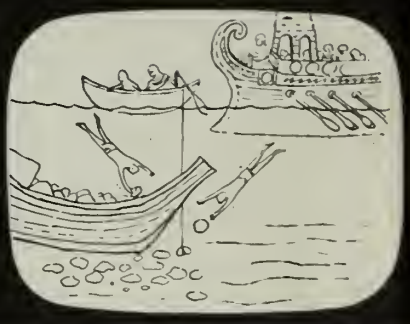
NAVYMEN IN THE UNDERSEAS WORLD



NATURAL INTEREST by ancient man in undersea world was sparked by superstition, mythology and adventure.



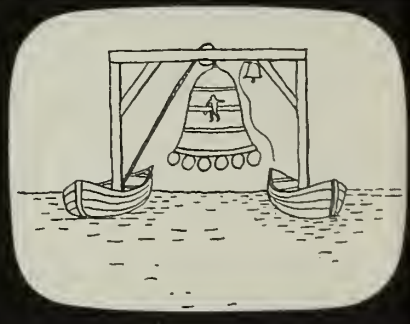
EARLY MAN probed the depths to obtain food, shells and coral, learning techniques still used in sponge-gathering.



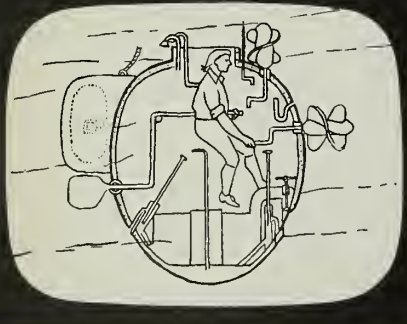
ROMAN NAVY divers foiled enemy plan for blocking harbor with sunken ships. Stones removed, ships reflooted.

FIRST DIVING BELL on record was successfully used in 1531 for one hour by inventor Lorena to hunt sunken treasure.

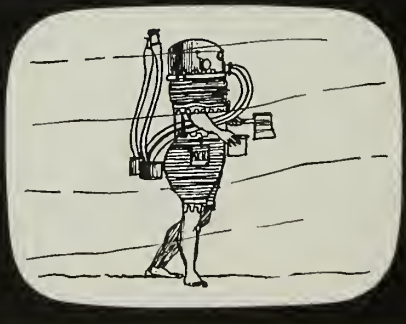
SEVENTEENTH CENTURY theorist Borelli recommended a large breathing tube; seemed logical but did not work.



WOOD AND IRON diving bell lowered between boats to recover Spanish treasure in 1677. Dives lasted two hours.



1776 UNDERWATER ATTACK by Bushnell's *Turtle*, attempt to blow up British man-of-war, Revolutionary War.



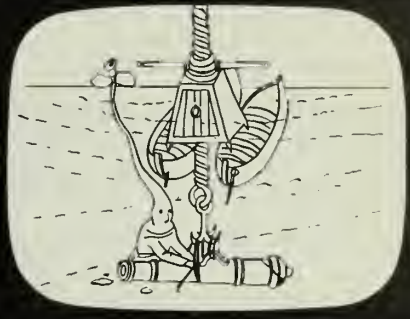
DIVING SUIT takes modern shape in 1797 in Klingert's metal helmet, belt, leather jacket, trousers (Germany).

1808 "TRITON" was bellows stropped to diver's back, designed to operate by nodding head to and fro to pump air.

Prepared by ALL HANDS Magazine

WEBBED GLOVES and frog-like flip-
pers by Leonardo da Vinci for pearl
divers showed astonishing foresight.

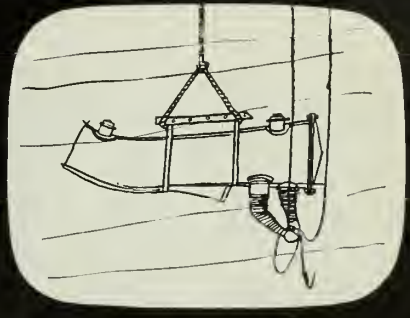
DA VINCI'S leather underwater mask
with rigid hoop reenforcement and
breathing tube was along right track.



GREASED COWHIDE hood, carefully
stitched, with tube floating on surface,
was plan of Ufano to salvage cannon.

GOATSKIN "AQUALUNG" by Borelli
in 1680 had closed circuit breathing
system that diver could replenish at will.

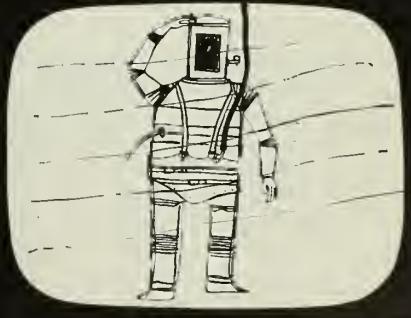
ASTRONOMER HALLEY conducted
diving-bell experiments in 1690 lead-
ing to solution of breathing problems.



PRESSURE PROTECTION in watertight
barrel, 1715 attempt to provide rigid
dress and air at atmospheric pressure.

AUGUSTUS SIEBE'S 1819 "open dress"
was successful forerunner of modern
gear. Pumped air escaped at waist.

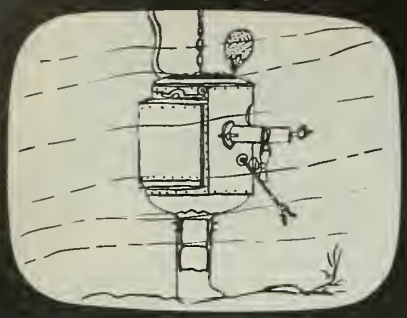
SIEBE'S "CLOSED DRESS" of 1819,
waist-length "open dress," developed
into the full-length suit used today.



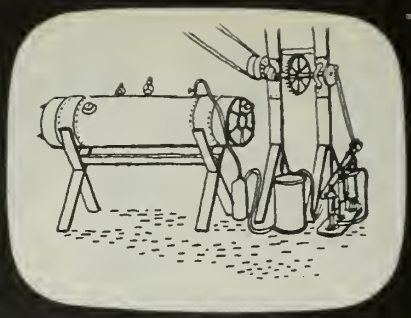
1838 ARMORED ATTEMPT by Taylor
to design deep-water diving gear was
on right track, had dangerous defects.

continued on next page

NAVYMEN IN THE UNDERSEAS WORLD continued



1856 ARMORED DRESS by U.S. designer Philips had sound influences on present gear except for "gadgets."



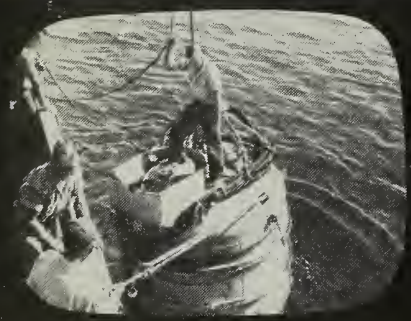
1869 COMPRESSION AND DECOMPRESSION tests by Professor Bert of France led the way to safer diving.

1872 FACE MASK and compressed air apparatus by Rouquayrol-Denayrouze introduced the equalized air pressure.

PERSISTENT CHIEF Gunner's Mate Stillson brought success to Navy with British Haldane safety tables in 1912.

1914 SUBMARINE ESCAPE apparatus used by U.S. Navy was British Siebe-Gorman unit similar to 1819 design.

DEEPER DIVES in open sea from *USS Walke* in 1914 went to 274 feet by use of stage method of decompression.

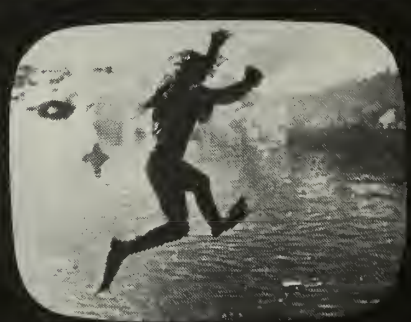


SUBMARINE RESCUE BELL training continues to develop safety techniques that assist in probe of underwater world.

MOMSEN LUNG qualification was a must for all Navy under-the-sea men. Replaced by "blow and go!" method.

RECOMPRESSION CHAMBER is used not only for emergencies but also to qualify for UDT, EOD and submariners.

SCUBA—Self Contained Underwater Breathing Apparatus—plus rubber suit is gear for cold water longer missions.



COLD-WATER SERVICE dress and face mask, no breathing apparatus, let frogmen handle the short jobs in icy waters.

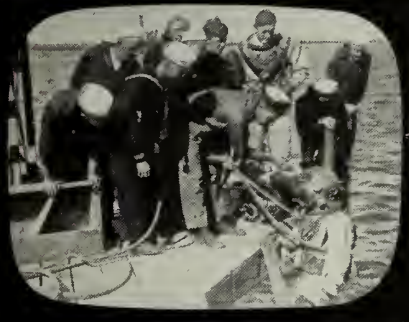
WARM-WATER TASKS requiring long submergence, as operating Aquaflex-encased movie camera, using Scuba.

Prepared by ALL HANDS Magazine

USS HARTFORD had "diving school for enlisted boys" in 1877. A hand pump on the deck supplied the air.

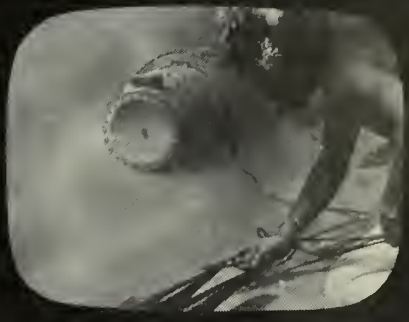
NEWPORT, R.I., 1900. Young officers learned to dive at the Torpedo Station under Master Diver Caleb West.

1909 NAVY DEEP DIVES were limited because of the lack of facilities to iron out the decompression problems.

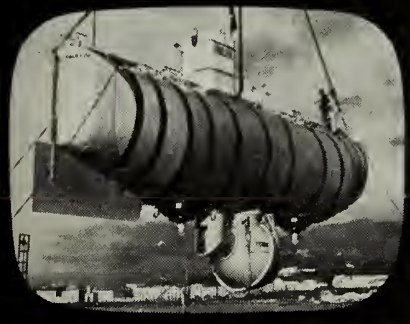


WORLD WAR I U.S. Navy Diving Unit performed invaluable salvage operations off the French Coast.

HEROIC SALVAGE work on sunken subs *S–4* and *S–51* enabled Navy divers to rescue trapped *Squalus* submariners.



WW II AND KOREA FROGMEN went in first for reconnaissance and UDT work and prepare for amphibious attack.



DEEP-WATER RESEARCH continues with ONR bathyscaph *Trieste* designed by Auguste and Jacques Piccard.

"BLOW AND GO!" is latest recommended method of submarine escape. Inflate jacket, exhale, and up you go!

MINIMUM GEAR in warm-water short-duration dives calls for just mask and flippers. No breathing apparatus used.

WIDE-VISION OXYGEN MASK and weighted belt serve as warm-water shallow-dive gear in emergency repairs.

SHALLOW-WATER lightweight dress for cold-water quick dives for repair, uses wide-vision mask. Ship feeds air.

DEEP-WATER GEAR IN USE today in Fleet has experience-tested safety features. Oxygen-helium suits are similar.

ESCAPE TECHNIQUE

The Momsen Lung was a life-saver to the Navy in more ways than one. It helped the sea service over a hump when the submarine was going through its early growing pains, after a period that came to be known—so far as subs were concerned—as the "Tragic Twenties."

The Momsen Lung did much to increase morale and help rebuild public confidence in the submarine. A quick look at those times will tell you why. A Navy doctor tells also what is now the approved technique that replaces use of the Momsen Lung.

THE TRAGIC HISTORY of submarine disasters of the 1920s pointed to need of a new kind of safety device. The United States, with its losses of USS *S-5*, *S-48*, *0-5*, *S-51* and *S-4*, was not alone in facing this problem.

In 1921, *K-5* of the British Royal Navy failed to return from a Fleet maneuver. The next year, *H-42* of the Royal Navy surfaced in front of a destroyer and was lost with all hands. In August of that year, the German *U-111* foundered. In 1923, the Japanese submarine *No. 70* sank because of premature opening of hatches. In 1924, *L-24* of the Royal Navy was rammed and sunk by a battleship, and another Japanese submarine was lost in a collision with a cruiser. 1925 saw three disasters: The Italian *Sebastiano Veniero* was sunk in collision; *S-51* rammed and sunk; and the Royal Navy's *M-1* also rammed and sunk. In 1928, Italy and France each lost a submarine and in 1929 two British subs rammed each other.

Each of these disasters meant the loss of many lives—usually of all hands aboard. In many instances, these men could have been saved had some type of escape mechanism been devised.

In response to this need, two developments made their appearance. One of these was the rescue chamber such as that used to rescue the crew of USS *Squalus* (see pages 59-63) attributed to LT A. R. McCann, USN, and the other was the submarine escape apparatus attributed to LT C. B. Momsen, USN. Today, the McCann rescue chamber is still in use aboard each ASR in the U. S. Navy.

Use of the Momsen Lung was discontinued in 1958 in favor of the present buoyant ascent technique. Nevertheless, the submarine escape apparatus (Momsen Lung) played an extremely important role in helping to promote the development of the underseas Navy.

It was essentially a closed cycle rebreathing device. The volume bag was charged with oxygen and as the wearer inhaled, he drew the oxygen through a canister containing a soda lime and then exhaled into the volume bag. The Lung used a mouthpiece with a set of spring-loaded mica disc valves to maintain the flow in one direction in a cycle. To-and-fro breathing was prevented by the valve system. Thus, the gas breathed in was drawn through the soda lime which removed the carbon dioxide exhaled in the preceding breath. The user could breathe in and out of the bag until the oxygen content was reduced to levels too low to sustain mental and physical activity.

IN THE EARLY DAYS of thought on this subject, it was believed that the development of diver's bends would be a problem. At first, a man was taught to slide up the ascending line until he met a knot. Here, he was supposed to stop and take a certain number of deep breaths, then continue. This would provide a rough form of stage decompression. In theory, and in the Escape Training Tanks, which were built a few years later, the idea was a good one. Unfortunately, it didn't work in the open sea.

Divers learned that in escapes from any appreciable depths, where decompression might be important, there were apt to be currents that led out the buoy holding up the ascending line in a long catenary. This meant that the knots on the line did not tell the distance from the surface.

VADM C. B. Momsen, USN (Ret.)

Thus, as men learned more about the sea and how to use the Lung, instruction went through a process of evolution over the years. It was realized, for example, that the bends could be offset by shortening the time under pressure just as well as providing decompression stops on the way up. In time, the emphasis shifted to the principle of simply getting out of the lower depths as quickly as possible.

The Lung also went through several revisions. The long tubes, connecting the mouthpiece to the volume bag in the early models, disappeared. In the later models, the mouthpiece and neck containing the valves was fitted directly into the top of the bag. It was this style which, over the years, became most generally known as the "Momsen Lung."

A rebreathing bag attached to the Lung, and an oxygen supply aboard submarines, suggested additional uses. A dual threaded filling cap was fitted into the canister; it could be removed and additional filters used in its place. The proper filter, therefore, enabled this gear to serve as a smoke, chlorine, ammonia or carbon monoxide mask.

Although these accessories met with somewhat indifferent acceptance among submarines, the Lung itself was a tremendous success. Each man was convinced that he could, at least, save himself in the event of a disaster.

IN 1945, studies were started at the Escape Training Tank, New London, in a method of escape known as free ascent. Instructors had long since learned to work underwater while holding their breath. They had learned that a man buoyant at the surface was, if his chest was equally distended, buoyant at any depth. The flesh and bones of his body act as a fluid medium and are not compressed at any depth.

However, if a man took a large breath from an air pocket deep in the water, and began to float to the

surface, he *must* exhale. If he were to hold his breath as he ascended, the air in his lungs would expand and possibly tear his lungs. If he exhaled too slowly, the effect could be much the same as if he held his breath. If he exhaled too rapidly, he might lose his buoyancy and sink like the proverbial rock.

This method had been demonstrated to submarines during World War II but, if there was any choice, it still was not the approved method of escape.

A committee report issued shortly after World War II disclosed that, in spite of all their training, many submariners had not used their escape apparatus at all. Even among those who tried to use it, many had used it improperly. As a result, it was found, as many men had made successful escapes (unintentionally, or by force of circumstances) without any apparatus as those who had made successful escapes with the Lung.

GOING UP—Momsen lung shown during submarine escape training session did much to increase morale, rebuild faith in subs after 'Tragic Twenties.'

THE QUESTION AROSE, of course: Why use the Lung? Inevitably, interest in free ascent increased, and it became a standard part of escape training at New London. Trainees often expressed a preference for free ascent. For some time, training included both the use of the Momsen Lung and the new technique. However, two fatalities within six months in 1952 brought the free ascent training to a halt.

At the same time, the theory of "buoyant ascent" gained more attention. It, too, was simple.

Wearing a Scuba and a standard life preserver, the first man goes out the escape hatch of a submarine to make sure the exit route is clear. When ready to make his escape, he inflates the life vest until it is comfortably full and checks the spring loaded relief valves to make sure they will vent excess pressure. Then he flushes his lungs with a few breaths of fresh air to extend his breathholding time. Then he holds his breath while making his exit out the hatch.

When in the clear, he exhales most—almost, but not quite all—of the air in his chest, and turns loose. He knows the life vest will bring him rapidly to the surface. The air remaining in his chest will expand and refill his lungs. He should continue to exhale during the ascent.

In many cases, he will pop up out of the water almost waist high. Then he relaxes in his life vest which holds him face up and head out of the water, until his shipmates join him. That's all there is to it.

The essential idea had been known for several years and demonstrations had been included as a stunt in "shows" at the Tanks for some time. At first, it was regarded as more dangerous than the free ascent method because the rate of ascent was more rapid.

Eventually, this was found not to be true. In addition, the method was not only simple to teach, but could be taught with relatively little risk. Its simplicity, plus the fact that it meant a good life preserver was at hand at the surface, soon created an enthusiastic group of supporters for this "new" method.

IN 1956, *buoyant-assisted ascent* became the approved method of individual escape from a submarine.

On 16, 17 and 18 Apr 1957, training escapes were made from USS *Tang* (SS 563) while it was bottomed in 142 feet of water.

With this event, 30 years of history came to a close. An invention which made it possible for the Submarine Service to continue, has gone to the scrap heap. Even there it must be mutilated so it will not fall into the hands of some unknowing enthusiast and be used as a piece of Scuba equipment. (If used as Scubas, Momsen Lungs are dangerous—this is the reason for the BuSandA instruction that directs their mutilation.)

At the time of the introduction of the Momsen Lung there was no really practical or widely used self-contained underwater breathing apparatus, and Scuba was still back in the alphabet. Today thousands go underwater where only a few went before. But for three decades of submariners there will always be a soft spot near their heart for Vice Admiral C. B. Momsen, USN (Ret.) and the Momsen Lung.

—CAPT Harry J. Alvis, MC, USN.

BUOYANT-ASSISTED ascent is now approved method of individual escape.

AT WORK—Diving corpsman checks trainee, and *right HM* leaves recompression chamber after 44-hour vigil.

Deep Sea Corpsmen

THE NAVY'S HOSPITAL CORPSMEN pop up in all sorts of places all over the world—from the battlefields where they serve with the Fleet Marines to the shadow of the Egyptian pyramids where they help search out the causes of little-known diseases.

One of the oddest of the corpsman's many odd jobs—and one of the most hazardous—is that of the Medical Deepsea Diving Technician, the Navy "Doc" who not only does the everyday job of tending the sick, injured and wounded, but who also functions as a deepsea diver. Thoroughly skilled in both specialties, he may be called upon to perform the duties of either any time of the day or night.

How does a man get into something like this? Well, here's the way James "Happy" Chandler, big six-foot, three-inch HMC, puts it:

"I was on independent duty during the war, serving in DEs. Because I was the only medical man on board it was interesting work.

"After that challenging and sometimes exciting work I was assigned to a shore station dispensary and then to a naval hospital. Compared to DE duty the shore station jobs seemed tame, and, I might add, somewhat boring, so I looked around for something that would really test my mettle.

"I hadn't known, nor even suspected that corpsmen worked as deepsea divers until one day when I was shooting the breeze with a boatswain's mate diver who told me about them. The more he talked, the more interested I became and, finally, after thinking it over, I decided this was just the thing for me. I put in a request to go to diving school, the Chief of Naval Personnel approved it, and I've never been sorry."

Since he became a diver the chief has made some 250 trips underwater, but he still says, "Never a day goes by that there isn't something new. I don't know of any job that could be more interesting."

To qualify as a "Diving Doc," a hospital corpsman is sent to the Naval School, Deepsea Divers, in Washington, D. C., for 28 weeks of rigorous training—26 weeks for the regular Diver First Class course, plus two more weeks to study diving diseases, gas analysis and such.

DIVING 'DOCS' work with divers and with submarine escape trainees.

After Chandler completed his training he drew a submarine rescue vessel assignment. He reported to USS *Kittiwake* (ASR 13) and got right on his job.

Although he did a normal amount of deepsea diving, his primary duty was to help in the treatment of the other divers on board. Every time they went over the side he stood by and, since he knew their work as well as his own, he was a good man to have around—especially when medical aid was necessary.

Chief Chandler now works at the Escape Training Tank on the Submarine Base at Pearl Harbor. Here, in a towering edifice, 134 feet high and filled with 210,000 gallons of water, submarine crews are trained in the latest underwater escape techniques, practicing the actual steps they would take to get out of a sunken sub alive.

At times the corpsmen at the tank also battle the grim reaper—usually when amateur aqualung enthusiasts are brought in with the bends, acquired from too deep a dive, too long a time underwater and too rapid a surfacing.

A victim of the bends must be taken into a decompression chamber and, by means of air pressure, brought to the depth (pressure) at which he finds relief from the symp-

tom. This is a long and involved procedure in which there is no room for mistakes. A corpsman or doctor must stay with the victim the whole time he is in the chamber, which can mean a matter of several days. During that time pressure is released little by little as the victim is "brought up" from the deep.

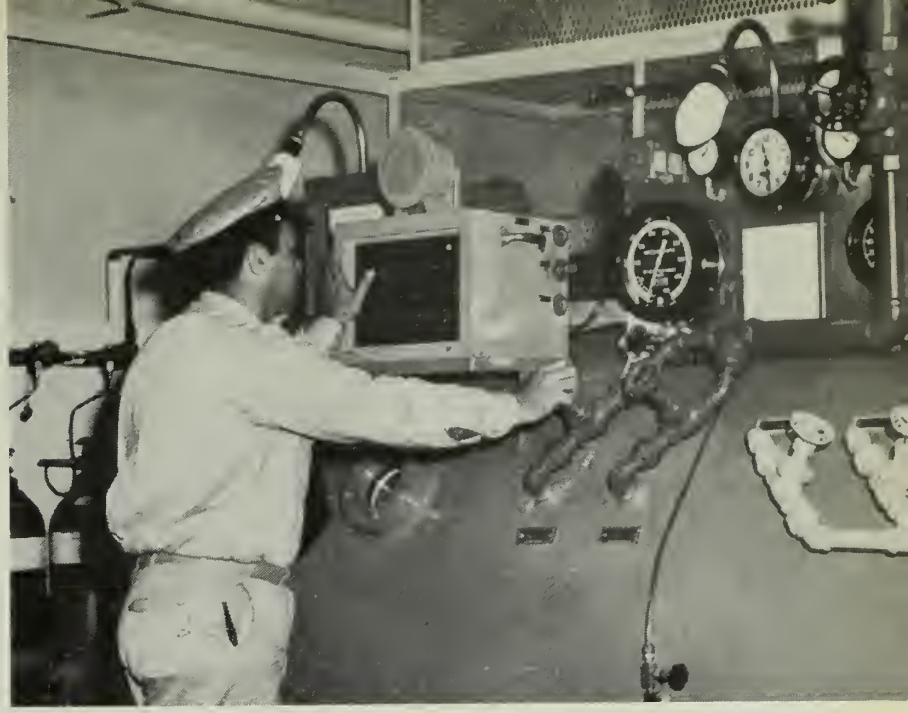
Chandler has spent many a night and day in the chamber, ministering to sick divers, testing pulse, respiration and such, and taking care of all the other details that need tending.

The treatment of air embolism also takes a long time for both victim and corpsman. To treat this disease the victim is put under pressure, and then brought up very slowly through decreasing pressures until he has reached "the top." During this ordeal the victim's condition must be given close attention, so a doctor or corpsman remains in the decompression tank with him.

One such case involving the "diving docs" at Pearl Harbor occurred early in 1957. Joseph L. Reynolds, a first class corpsman and diver, put in a 73-hour vigil with a Navyman who was suffering with the bends. The victim recovered and returned to duty. Some time later an Army sergeant was stricken while aqualunging with two companions at a remote beach almost at the other end of Oahu Island.

The incident illustrated the importance of proper indoctrination and the dangers involved. The sergeant's oxygen supply became depleted while he was submerged and he was forced to ascend too rapidly. Although he was rushed to the decompression chamber as quickly as possible, two hours elapsed between the time his distress was first noticed and the time he entered the chamber. Those two hours turned out to be irreplaceable. Reynolds, called from sick bay at noon, spent the next 46 hours in the chamber. Despite all that he and the two medical officers on the case could do, the sergeant died eight hours after he had entered the chamber. After the soldier's body was removed, Reynolds still had to remain in "the igloo" for 38 hours more. Because he had been under great pressure for a considerable length of time, he had to be taken through "table four," the longest and slowest ascent table in the book.

—Bryant Arbuckle, JO1, USN



DOUBLE DUTY—Experiences of diving HM's come in handy around recompression chamber and under sea. *Below:* J. Reynolds, HM1, readies for dive.

WHAT'S IT LIKE ON THE

As with so many other areas of human endeavor, exploration of the ocean bottom first began slowly, then grew at an ever increasing pace.

So far as we know, Magellan was one of the first to make the attempt. Somewhere in the far Pacific, he lowered his standard 200-fathom sounding line and, when it failed to touch bottom, came to the conclusion that he was over the deepest part of the ocean. His was not the last error to be made during the development of this science.

The next recorded attempt was made some 300 years later. In latitude 27° 26′ S., longitude 17° 29′ W., Sir James Clark Ross tied together every available line aboard *Erebus* and *Terror* and finally touched bottom at 2425 fathoms. This was, apparently, the first successful deep-sea sounding.

A sounding such as this was a major operation. The weather had to be nearly perfect, the ship had to stand as nearly motionless as possible, and the operation itself, involving as it did, miles of recalcitrant line, usually required a full day. Little wonder that skippers were reluctant to waste the time.

By 1854, when LT Matthew F. Maury, USN, collected all available records, only 180 deep-sea soundings had been made in the Atlantic and, by the time the modern echo sounder was introduced (in 1922, by the Hydrographic Office), a world-wide total of about 15,000 had been recorded. This averages out to roughly one sounding for every 6000 square miles of sea.

Today, hundreds of ships are equipped with sonic sounding instruments that trace a continuous profile of the ocean's bottom. This is a generalized summary of what they have found:

Once clear of the tidal areas, the oceans consist of three distinct areas: the *continental shelf;* the *continental slope;* and the *floor of the deep sea.*

The shelf has much in common with the land itself. Sunlight penetrates most of it to a varying degree; such vegetation as grows in the ocean may be found here; and much of the shelf consists of material washed into it from the land. The more familiar forms of fish may be found here. It is this relatively narrow portion of the sea that has been, up to now, of the greatest immediate importance to us. Parts of it may have been dry land at one geologic time or another.

At one time, the 100-fathom line was generally accepted as the line of demarcation between the continental shelf and the continental slope. At the present time, however, it is the fashion to mark the division wherever the relatively gentle slope of the shelf suddenly begins its plunge into the great depths. This abrupt dropping off averages, the world over, at about 72 fathoms, although there are some spots where the shelf ends at between 200 and 300 fathoms.

On the Pacific coast of the United States, the shelf is relatively narrow —not much more than 20 miles wide. On the Atlantic coast, the shelf is usually much wider. Somewhat north of Cape Hatteras it is as much as 150 miles wide; yet at the Cape

itself and off certain parts of Florida, the plunge begins almost immediately.

Beyond the shelf, no matter how deep nor how far from land, the bottom drops off abruptly. Here, if man could enter it, would be a new and uncomfortable world. A frightening and awesome world. There is little light, no plant life; the pressure, cold and silence increase; the scenery is mud, rocks and clay, inhabited by large and small carnivores such as those encountered only in nightmares. The slopes are well below the familiar surface wave action, yet strong currents and tides move back and forth and, to some extent, up and down.

It is highly probable that these areas have never seen air and sunlight since the ocean's basins were first filled with water. It is not likely that they will again be revealed to view until the waters of the earth dry up for the last time.

In a way this is a pity, for the slopes are regarded by those who know as perhaps the most impressive physical manifestations on earth. They drop off abruptly from the continental shelves to the really deep ocean at as steep an incline as gravity will permit. Their average height is some 12,000 feet, although drops of 30,000 feet have been recorded.

OCEAN BOTTOM?

ONE OF THE MOST spectacular features of the slopes are the tremendous submarine canyons which, with steep cliffs and winding valleys, cut into the shelves almost to the continents themselves. These canyons have been found everywhere, soundings have been made and, in all probability, are of world-wide occurrence. Geologically speaking, they are relatively young—no more than a million or so years old—but how they were formed, and why, no one knows.

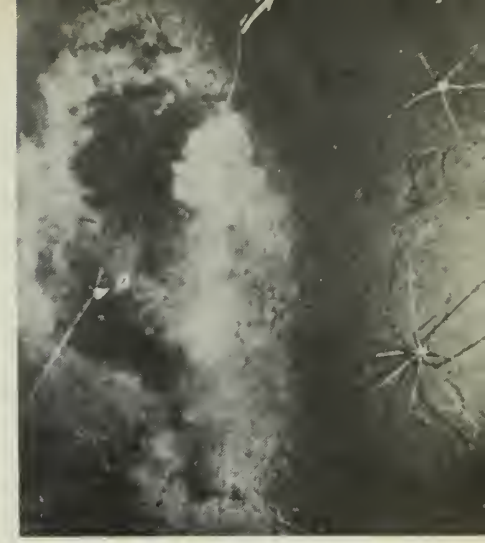
There are dozens of such canyons along the slopes and the most spectacular of our terrestial scenery, the Grand Canyon could, in some cases, be dropped into any one of these with hardly much more than a splash. They are usually found near the mouth of a continental river.

Geologists suggest the obvious clue (but any theory offered is promptly challenged by contradicting evidence) that the submarine canyons were cut by rivers at some time when their gorges were above sea level. It is agreed that the sea level dropped during the Ice Age, but only a few hundred feet at most. Some canyons are a mile or more in depth.

The most completely surveyed canyon in the Western North Atlantic is the Hudson Canyon. This extends from the 100-fathom curve, 90 miles southeast of New York harbor to a 2650-fathom plain some 300 miles offshore. This 200-mile long canyon is a chasm 1000 feet deep in places and has several sizable tributaries entering it. The canyon cuts through the continental slope and joins a depression in the continental shelf which marks the entrance of the Hudson River channel off New York harbor. In this instance, the Hudson Canyon system acts as a sluiceway down which sediment is carried by currents to the deep sea bottom which, at this spot, is an enormous plain of just plain mud. A near neighbor of the Hudson Canyon, the Mid-Ocean Canyon, starts near Greenland and extends some 2000 miles south. So far as is known, there are no major rivers in Greenland. Glaciers are thought to be the origin of this little number.

THE FLOOR of the deep ocean—the abyss—has not been subjected to the type of erosion responsible for our most spectacular scenery but this does not mean that no geologic action has taken place. The floor of the sea, like the continents, is a thin crust over the molten center of the earth and, like a pot of thick fudge, the entire crust is slowly—very slowly, with thousands and millions of years between each blop—bubbling and boiling.

That, at least, is one theory. This explains the wrinkles and folds where, at one spot, the interior cools imperceptibly and shrinks away from its covering. In another area, it falls away into the famous deep trenches and in still another, it pushes up conelike shapes of underseas mountains as volcanoes boil upward from the depths of the earth.



SEA STARS—Starfish and sea spiders were photographed on bottom of the Atlantic ocean 975 fathoms down.

The deepest depressions occur not in the center of the ocean's basins, as might be expected, but near the continents. The Mindanao Deep, east of the Philippines, is some six and one-half miles deep. The Tuscarora Trench, east of Japan, nearly as deep, is one of a series of long narrow trenches that border the outer rim of a chain of islands that include the Bonins, the Marianas, and the Palaus. The greatest deeps of the Atlantic lie near the West Indies, and also below Cape Horn. In the Indian Ocean, the curving island arcs of the East Indies have their accompanying deeps.

In addition to these trenches, or deeps, the existence of a continuous underseas crack some 45,000 miles long has been claimed by the Lamont Geological Laboratory within recent years. They say this rift aver-

DEPOSITS on floor include things dating from beginning of time. Shipwreck discovered off Cape Hatteras.

Mud Comes in Handy

So the bottom of the ocean is covered with mud! Who cares?

The Navy cares and, at times, is glad of it. The California Academy of Sciences, while engaged in an oceanographic survey sponsored by the Office of Naval Research, reported that not far off the coast of California the ocean bottom was covered with large areas of thick, gooey mud. Since the ocean's depth at that point was some 500 fathoms, this appeared to be further fascinating information—to be filed.

Then some unsung genius connected this sticky fact with the problem of disposing of large quantities of radioactive waste.

Now, the waste is loaded into steel drums, carried to muddy-bottom areas, and heaved overboard. The drums sink far into the mud long before they disintegrate and the mud absorbs the radiation. This avoids contaminating large volumes of sea water which would happen if the drums happened to be dropped on a sand or rock bottom.

The moral? Basic research is a fine thing whenever applied.

ages 20 miles wide and one and one-half miles deep. It coincides with a world-wide active earthquake zone along its entire length. Almost all of the earthquake shocks along the 45,000-mile line occur almost exactly within the limits of the rift.

The main line of the rift system is believed to extend through the North and South Atlantic Oceans, around the top of Africa into the Indian Ocean, and then branches through the Arabian Sea.

The other branch is supposed to pass between Antarctica and New Zealand, then branches again near Easter Island. Deepest point in the rift line is about four miles below the surface.

UNTIL RECENT YEARS, not much was known about the bottom of the Pacific. Most soundings had been taken near the coast and, as the ocean floor was relatively smooth in those areas, it was assumed that the floor was equally smooth all over.

Not so. Oceanographers of the Navy Electronics Laboratory tell us that only about 10 per cent of the bottom is smooth.

For a long time, geologists have wondered about the relationship between the great linear features of the earth's crust. On the continents, these have been so eroded that little more than "ruins" remain. Under the sea, however, where they have been protected from erosion, many more details have been revealed.

Between 1950 and 1953, four great parallel cracks or fracture zones were discovered by NEL on the floor of the northeastern Pacific. The northernmost, called the Mendocino Escarpment, extends westward from Cape Mendocino, Calif., for more than 1400 miles. One of its walls is 10,500 feet high. South of this is the Murray Fracture Zone, which can be traced from a point near the Pacific coast almost to the Hawaiian Islands. It hasn't yet been confirmed, but it is considered possible that this crack may run through the islands and continue into the undersea Mid-Pacific Mountains further west.

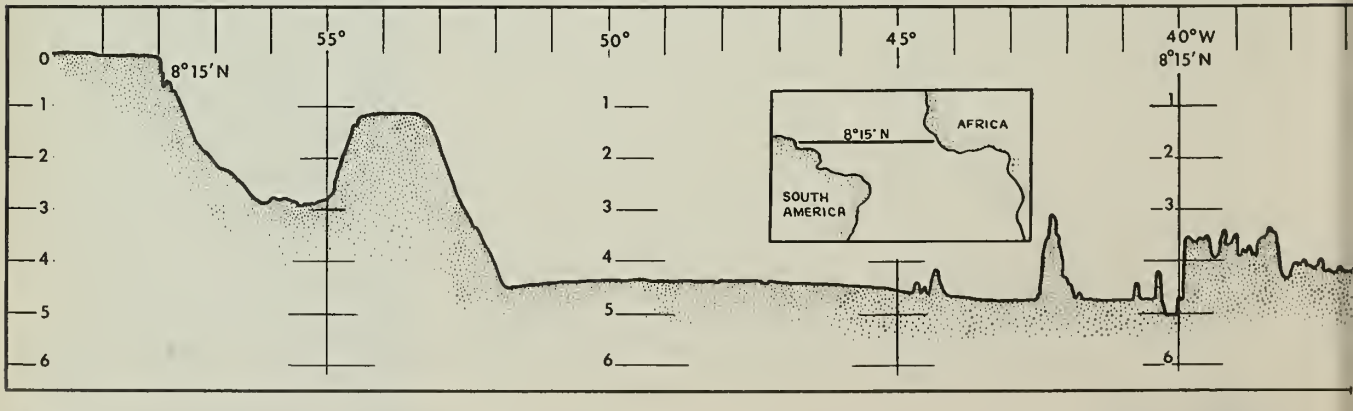
Off the coast of Mexico is a third great zone called the Clarion Fracture Zone. It cuts the ocean floor for at least 1700 miles and is thought to cross the continent along the lines of the volcanoes of southern Mexico. The last zone to be discovered and still under study, is the Clipperton Zone, which has been traced for more than 3300 miles. This lies farthest south of the four.

How are these breaks to be explained? It is believed (at the moment), that they and portions of California and possibly the Hawaiian Islands were created in one great upheaval of the earth's surface between some 150 and 50 million years ago—give or take a few million. Two possible reasons are given for the cracking. The first and most likely is the slow movement of great convection currents in the "plastic" material of the earth's mantle under the harder surface crust. The other —which is questionable—is the migration of the north pole from a position in India to its present position. Take your choice or, if you prefer, offer your own theory.

EXPLORERS HAVE, for a long time, realized that many of the islands of the oceans are simply the tops of mountains that rise from the floor of the sea. Most of the islands of the Central Atlantic, for example, are peaks of the Mid-Atlantic Ridge (see below, page 42). The Hawaiian Islands are peaks along the top of a great submarine ridge more than 1600 miles long. The Marshall Islands are coral caps on great volcanoes. Thousands of other mountains rise from the bottom of the Pacific but do not quite reach the surface. Dozens of other peaks were islands at one time but have sunk and now lie below the sea's surface.

While the transport USS *Cape Johnson* (AP 172) made its long voyages across the central and western Pacific during World War II, Dr. Harry Hess, formerly of Princeton University—her navigator and

SONIC SOUNDINGS have given new light on the contours of the vast region of earth covered by oceans.



later her commanding officer—studied the records of the ship's echo sounder. One day the soundings showed the presence of a large submarine mountain whose top was too flat and too big to have been the crater of a submerged volcano.

Later, he crossed 10 more of these strange "islands," and later discovered others in the records of the Hydrographic Office. Since that time more of these islands have been discovered and, in 1950, the Scripps ship, *Horizon,* discovered the Mid-Pacific Mountains, a submarine range extending from the vicinity of Necker Island of the Hawaiian group, to the vicinity of Wake Island.

Many of the peaks of this range, the highest of which towers more than 13,000 feet above the sea floor, have the peculiar flat tops first noted by Dr. Hess.

Material obtained by dredging and coring along the tops and upper sides of these seamounts have provided clues as to their origin. This material consisted of pebbles, cobbles and boulders of basalt, many of which appeared to have been rounded by the action of rivers or beach waves; and of limestone containing coral of about 100 million years ago. It was concluded that, during the time when dinosaurs still roamed the continents, this undersea range formed a chain of islands.

At this time, the sea eroded the projecting peaks of the chain to flat surfaces. Reef coral larva drifted to the islands, probably from the east, and lodged on and among the debris. In the warm tropical surface waters, enough of the corals grew and accumulated to form banks, but not enough to conceal the rocks and finer sediments and thus form atolls.

Probably, as a result of adjustments of the earth's crust, the great range sank, at first fast enough to kill the reef coral, then more slowly until the present depth was reached.

There it still remains—the oldest uneroded group of mountains known on earth—disturbed only by weak currents and the slow rain of tiny organisms from the waters above.

THE MID-PACIFIC MOUNTAINS may lay claim to being the oldest, but the Atlantic claims to have the biggest range of mountains. It winds from the Arctic to the Antarctic with peaks averaging 10,000 feet. One undersea giant, Pico, in the Azores, rises 27,000 feet.

Known as the Mid-Atlantic Ridge, this chain of submarine peaks and plateaus runs the length of the vast S-shaped trough of the Atlantic. Throughout much of its 10,000-mile length it gives the impression of an object formed by the interplay of great, opposing forces.

The range is about twice as wide as the Andes, and several times the width of the Appalachians. Near the equator a deep gash—the Romanche Trench—cuts across it.

The greater part of the Ridge is, of course, submerged. Its central backbone rises 5000 to 10,000 feet above the sea floor but there is another mile of water above most of its summits. Here and there peaks form the islands of the mid-Atlantic. The Rocks of St. Paul, near the equator are not much more than a quarter of a mile across, but their slopes drop off so rapidly that water more than half a mile deep lies only a few feet off shore.

NOT ONLY DO THE OCEANS contain mountains, valleys and plateaus, but rivers also have been found.

One, an estimated 250 miles wide and 1000 feet deep has been mapped in the Pacific by the *Dolphin*

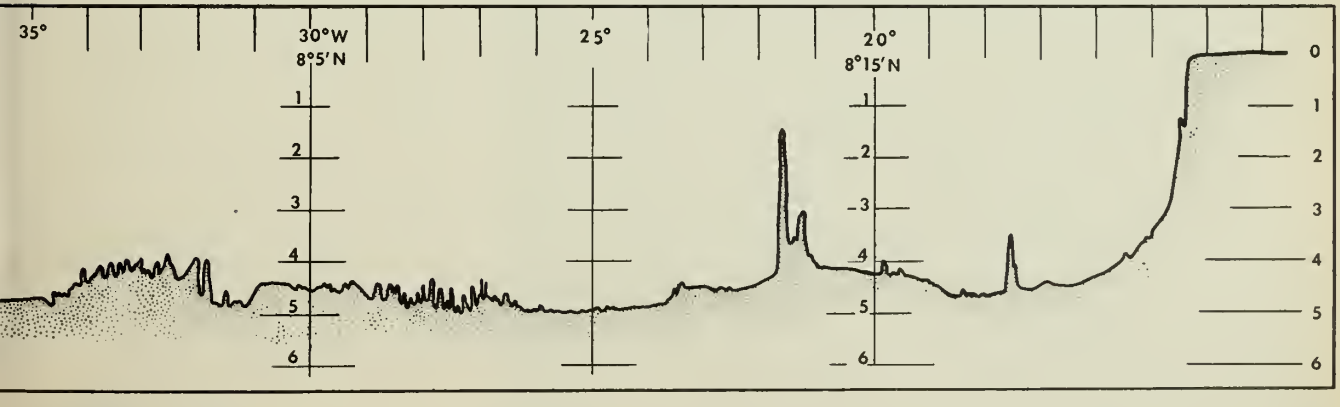
RECENT STUDIES sponsored by Navy Hydrographic Office came up with a deal of new information on bottom.

expedition of Scripps. This river flows eastward along the equator for at least 3500 miles.

The current was discovered in 1952 by a member of the U. S. Fish and Wildlife Service in his studies of long-line fishing, a technique used in Japan. A series of fishing lines are attached to a rope several miles long which is supported near the surface by buoys. When Townsend Cromwell, the Wildlife Service man, put out his lines, he found that they did not move westward with the surface current as expected, but in exactly the opposite direction—and at high speed.

Measurements showed that, at one point, the core of the current lies about 300 feet below the ocean's surface, that the current is about 700 feet thick, and that it is about 250 miles wide. It is more rapid than the surface current, averaging almost three knots compared to the surface current's one knot. The amount of water transported in a given time was found to be about equal to that of the Gulf Stream

CHART OF BOTTOM topography of Atlantic Ocean between South America and Africa was made by Woods Hole.



CURRENTS and rivers and effects of waves such as this rippled bottom have been found at depths where it was previously thought the water was still.

as it emerges from the Straits of Florida. The core of the current gradually rises until, near the Galapagos Islands, it is only about 140 feet from the surface.

The *Dolphin* expedition also found *another* current beneath the Cromwell current. This one, relatively weak, flowed westward. Thus, in one area of the Pacific, within the first few thousand feet of the surface, we have three considerable currents lying like ribbons on top of one another and being pulled in different directions.

Are there more than three? Where does the water come from, and where does it go? We don't know. But we'll find out, some day.

IN RACHEL CARSON'S truly great book *The Sea Around Us,* she describes in one of her finest passages, "the long snowfall—the steady, unremitting, downward drift of materials from above, flake upon flake, layer upon layer—a drift that has continued for hundreds of millions of years, that will go on as long as there are seas and continents."

That, in short, is what lies on the bottom of the sea.

In addition to the silt of every river that empties into the ocean, there are other materials that make up the sediment. Volcanic dust, which may have been blown half way around the world, eventually finds its way to the ocean, floats for a while on the surface, then sinks. Dust from the desert is blown out to sea. Gravel, stones and small boulders, picked up by glaciers, fall to the bottom when the ice melts. Meteoric debris that enters the earth's atmosphere over the oceans finds its way to the bottom. A flake at this point; then, a minute, an hour or a year later, another flake there—each is added to the bottom of the sea. Added, but rarely subtracted.

Impressive as the total of this material may be, it is of minor importance compared to the billions upon billions of tiny shells and skeletons of the minute creatures which, for millions of years, have lived in the upper levels of the sea and then, upon death, have drifted downward.

HOW DEEP is this sediment? Until a few years, ago, no one could have spoken with any assurance. Now, educated guesses have been made. The rates of fall in different parts of the ocean presumably vary, but in any event, it is very slow. Cores, first 10 feet deep and later, 70 feet deep, have been taken from the bottom. It is assumed that each of these cores represents millions of years of geologic samples. Through a tricky technique of seismic refraction, by means of which sound waves travel horizontally through rock, sediment layers of 12,000 feet have been found in the Atlantic basin. No sediment layers thicker than 1000 feet have been found in either the Pacific Ocean or the Indian Ocean.

The Atlantic Ridge was mentioned earlier. Consider this: As the approach to the foothills from the American side of the ridge begins, the sediments deepen as though they were mammoth snow drifts—snowdrifts 1000 to 2000 feet deep against the slope. Farther up the Ridge, where occasionally the terrain flattens out into plateaus, the drifts increase at times to 3000 feet. The peaks are bare.

Near the continents, on the edges of the continental slopes, is just plain mud—blue, green, red, black or white—washed out to sea by the rivers. Farther out, the sediment is composed primarily of the shells of the tiny, one-celled creatures mentioned earlier—*globigerina.*

The sea floor over large areas in the temperate zone is covered with these shells. Over the ages the species have varied somewhat, so that it is possible through their shells, to estimate the age of the deposit. Like most one-celled creatures, an individual globigerina normally does not die but, by division, becomes two.

When this occurs, the old shell is discarded and each of the two tiny blobs grows new ones. The old shell falls to the bottom. Each shell is small, but in their numbers they have covered millions of square miles of ocean bottom, sometimes to a depth of thousands of feet, or even more.

The discarded husks of other living creatures also help form the bottom. *Radiolarians,* similar in appearance to snowflakes, form broad bands of ooze in the North Pacific. *Diatoms,* the microscopic plant life of the sea, are abundant only in cold waters. Because silica is resistant to solution in salt water, and because diatoms possess coverings, there is a broad belt of diatom ooze on the floor of the vast Antarctic Ocean.

Again, in the North Pacific, immense areas of the bottom are covered with a red, soft sediment. It occurs only at great depths and the only organic remains found so far are sharks' teeth and the ear bones of whales.

Where did the red come from? No one knows, but it has been proposed that the material may be windblown from the world's desert areas.

As you read this, more flakes of the "long snowfall" are drifting downward to the bottom of the oceans; acres of ooze are sliding down a sharp slope; slow currents are pushing their way silently through the black, cold water as they have done since time began.

This is the underseas world.

Treasure Below

MOST SEEKERS OF BURIED treasure find little to reward them for their time and effort. But such was not the case in the Navy's search for silver in the Philippines' Caballo Bay, as well as Tokyo Bay, back in 1945.

The story of the treasure of Caballo Bay began in the early part of World War II.

When the Japanese advanced on Manila the government of the Philippine Commonwealth moved its money to Corregidor. USS *Trout* (SS 202) carried some of the money to safety. However, seven to eight-and-one-half million dollars worth of Philippine pesos still remained on the Rock. To prevent all that silver from falling into enemy hands, it was dumped into the Bay.

After the Japanese took Manila they attempted to salvage the treasure, using POWs and native divers. Altogether, more than one million dollars in coins were recovered before the Japanese discontinued the operation in November 1942.

In 1945 Manila was retaken by American troops. At first, salvage crews were too busy clearing up shipping facilities to pay much attention to the underwater treasure. However, when "bootleg" divers started seeking the money, the Navy was asked to help recover it. The Navy set to work in June 1945.

The silver rested in mud about 110 to 120 feet below the surface of the Bay. It had been in bags, packed in wooden boxes, but the boxes were now so flimsy that they had to be loaded into GI cans before they could be raised to the surface. The weakness of the boxes was partly due to natural damage from three years underwater and partly due to the deliberate efforts of the POW divers to weaken the boxes and scatter the coins.

When the money was brought up it was dumped on the deck, counted in the presence of an Army auditor and taken to an Army bank.

The Navy continued the job until about April 1946. By then some two-and-one-half million dollars worth of coins had been recovered. That, together with what the Japanese had brought up, made a total of around $3,500,000. The government of the Philippines recovered some more of the money in later salvage operations. However, a very considerable sum still remains on the bottom to tempt future treasure seekers.

The treasure in Tokyo Bay—more than six tons of silver ingots—was recovered in November 1945. It was valued at approximately $200,000.

In the latter part of August 1945, when the U. S. Third Fleet was entering the waters of East Japan, the Japanese had tried to remove the bullion from the Yokosuka Naval Base, where it had been stored. A typhoon and the Navy's arrival prevented any transfer.

The existence of the silver was not reported to the Navy when it took control of Tokyo Bay on 5 September, nor was it mentioned in the official report of 15 September on the list of assets of the Yokosuka Yard.

Meanwhile, salvage operations in the harbor were getting underway. Captured Japanese floating cranes were used to clear the shipyard, and it was a chief boatswain, in charge of one of these cranes, who turned up the first clue to the treasure.

He reported finding a bar of tin aboard the crane. The "tin" turned out to be almost pure silver.

Japanese yard workers (including the former operator of the crane) and officers and enlisted men who were known to have been in the area all denied any knowledge of the matter. However, the questioning resulted in a letter from the former Japanese deputy chief of staff to Commander Fleet Activities. The letter said there were 200 bars of silver just 40 yards offshore. It also explained why the silver had not been reported earlier.

NAVY DIVERS have gone below to do jobs including treasure hunting.

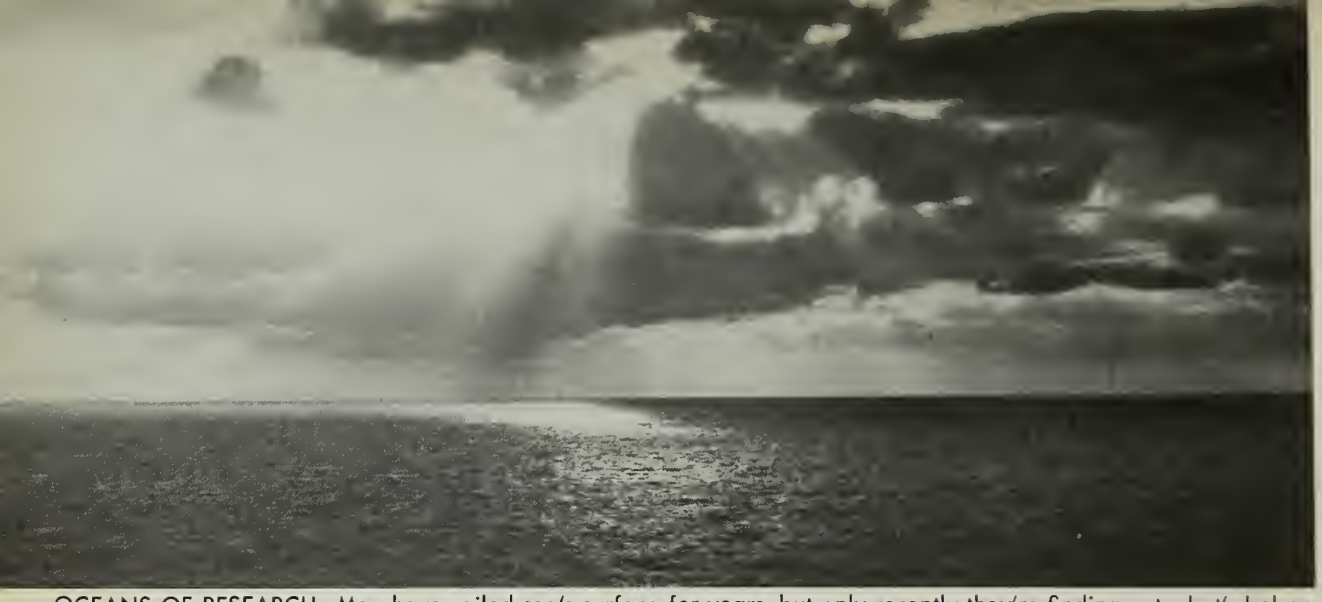
On 23 August, the admiral wrote, the barge which was to have taken the silver from Yokosuka sank in a typhoon. Four days later it was refloated and brought back to the yard, where the barge—silver and all—was scuttled off Dock No. 3. The admiral had been unaware of the refloating and scuttling.

USS *Protector* (ARS 14) was assigned to the salvage job. She began operations on 2 November.

At 1200 on 3 November a wire cargo net, full of silver ingots, was found under 40 feet of water. The divers used probing bars and high-pressure water hoses to clear away the mud, and loaded between five and 10 bars at a time into canvas sacks which were then hauled aboard *Protector*.

Six days later, 182 ingots, each weighing 60 pounds, had been recovered. The search for the other 18 bars continued until 24 November, but without further success.

GOLD RUSH—Navymen shown evacuated Philippine gold before surrender. Some still remains at bottom of Caballo Bay in spite of attempts to find it.



OCEANS OF RESEARCH—Men have sailed sea's surface for years, but only recently they're finding out what's below.

Space Research — Under Water

"WATER, WATER everywhere . . ." The Navy has been sailing on it and in it for years, but still would like the answers to a lot of questions about the sea. For example . . .

How can fish, traveling in large or small schools, turn or stop, go up or down, as one unit? We have only a few hints.

Why do deep sea fish literally "explode" when brought to the surface, yet a great change in depth doesn't seem to bother others? How can a whale—a mammal—dive for hundreds of fathoms, then come charging to the surface at the exact spot from which he descended? We have some idea, but we're not too sure.

What caused the enormously deep chasms in the bottom of the ocean? We have a theory. We have several theories.

What caused the bottom of the sea to become so jagged and irregular? Again, our answer depends on theory.

Why, in the major ocean stream, does the current flow in one direction and, immediately below, flow in the other?

We don't know, even though we can justify the existence of ocean streams in theory.

The questions listed above could be extended for pages if we wanted to but we're learning at an increasingly rapid pace. Even when we don't have the complete answers, we know that many of our earlier theories about some of these problems were wrong. That's something.

A REVOLUTION is taking place and, whether or not you know it, you're taking part in it. In recent years we have, with a sense of shock, realized that although men have crawled over the face of the ocean for thousands of year, we know almost nothing about the sea below the surface. Until our present era, we took it for granted nothing much was there. Our present limited knowledge has only helped us to comprehend the great potentials ahead of us. The more we have learned, the more important the subject has become.

The ocean—what it is and what it does—is, of course, of peculiar interest to the Navy. It's the environment in which it operates. It takes only a minimum imagination to appreciate that, with the growing importance of the nuclear submarine, from here on in, we will operate not only *on* its surface but, for the first time, *in* it.

It is our thesis that the oceans, their behavior and their contents might be as important to all of us as that equally unexplored area, the space above us. It is a tribute to our present stage of knowledge, limited as it may be, that we are in a position to ask the questions mentioned above.

After all, on the face of it, once you've seen one piece of ocean you've seen it all. It is quite an accomplishment that we have learned that there *are* deep chasms, that the bottom of the sea *is* irregular, that there *are* definite currents below the surface of the ocean. In time to come we will discover the reasons for all these phenomena.

THE STUDY of the ocean is, of course, by no means new. Men have been writing and telling sea stories about it ever since Homer described the adventures of Ulysses. But it was an American naval officer, CDR Matthew Fontaine Maury, who in the 1840s and 1850s, first dignified the subject with a scientific approach. He charted the currents of the ocean and proved that these immense streams have stability and direction and that they have a profound influence on climate. In short, he taught the Navy how to navigate with the seas rather than against them.

It is only reasonable that the Navy should have a deep interest in oceanography. Consider, for example, this list of Navy activities which depend upon the subject for basic information: The Bureau of Ships, the Hydrographic Office, the Bureau of Ordnance, the Naval Research Laboratory, the Underwater Sound Laboratory, the Navy Electronics Laboratory, the Chief of Naval Operations, the Fleet Sonar School, the Amphibious Forces, the Bureau of Medicine and Surgery, the Bureau of Supplies and Accounts and the Bureau of Aeronautics.

This demand has grown, to a large extent, since the end of World War II. As the intricacy of naval operations and armament increases, the need for technical understand-

ing of the sea keeps the same pace.

At the present time, the Navy's research program is under the direction of Gordon G. Lill, Head, Geophysics Branch, Office of Naval Research. Rather than set up its own laboratory (one already exists in the Oceanographic Division of the Hydrographic Office), the Navy underwrites the costs of projects in a number of existing civilian institutions. ONR does not closely specify the kind of investigations to be undertaken by these organizations. A free hand, it is felt, tends to foster healthy competition and leads to separate lines of attack by the competing groups.

THESE LABORATORIES — there are nine—are located on all three of our major coastlines. This enables them to study, for example, the deep temperature gradients of the Western Atlantic and the shallow ones of the Eastern Pacific; the shallow bays of the East Coast and the fjords of the Pacific Northwest.

Our Atlantic coast is typical of the western edges of most oceans. It has strong currents, a broad continental shelf, shallow "drowned river" estuaries, and a climate similar to that found on land.

The Woods Hole Oceanographic Institution is the major facility on the Atlantic coast. For the past 28 years it has carried out general oceanographic research as well as North Atlantic surveying. It has been active in research for the Navy, particularly in the field of underwater sound.

The Chesapeake Bay Institute, a fairly new branch of Johns Hopkins University, located near Annapolis, concentrates on shallow estuary problems such as harbor flushing and sedimentation. It is also concerned with the development of biological resources of the Chesapeake Bay. The Navy was somewhat startled to discover that the mud which affects the "setting" of oysters, also affects the setting of mines.

The Lamont Geological Laboratory of Columbia University specializes in marine geophysics and geology and in studies of the propagation of underwater sound.

The Narragansett Marine Laboratory of the University of Rhode Island is mainly devoted to the problems of biological oceanography, and its findings concerning fish noises are of interest to the Navy.

Yale University and the University of Miami also maintain oceanographic laboratories.

THE GULF COAST area has sometimes been called the "American Mediterranean," not only because of its importance but also, like the European Med because it consists of a series of deep basins separated by relatively shallow sills. For some reason, it appears that the temperature of the water in these deep basins increases with the depth. That doesn't follow the rules. The area is of unique interest for two reasons: Its tremendous oil resources; and the enormous discharge of the Mississippi River. Also of interest are the frequent tropical storms.

Since 1950, Texas A and M University has organized a Department of oceanography and has begun a regular oceanographic survey of the Gulf. Some petroleum companies also carry out specialized research.

The Pacific Coast is characteristic of the eastern boundary of oceans the world over and is very similar to western Europe. Its special oceanic features include a slow southerly coastal current, steep shores with a narrow continental shelf, less oxygen than customary, and long-period waves.

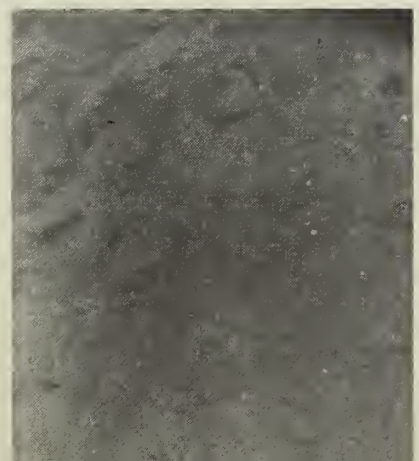
The Scripps Institution of Oceanography of the University of California, at LaJolla, is the chief oceanographic facility on the Pacific. During the war it was the chief center for training naval officers in techniques for forecasting sea, swell and surf. At the present time it carries on general oceanographic work in cooperation with the Marine Physical Laboratory and the Navy Electronics Laboratory.

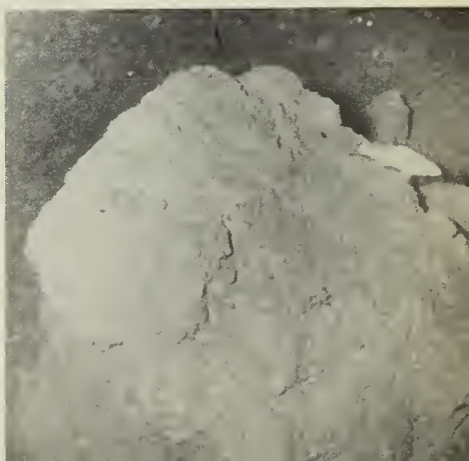
NEW JOB—Ocean research vessel, *USNS Chain* is doing deep-sea studies with scientists from Woods Hole lab.

The University of Washington at Seattle, Oregon State College at Corvallis and the College of Engineering of the University of California, at Berkeley, also maintain oceanographic laboratories.

Since 1947, ONR has taken over most of the support of oceanographic research for the Navy. Considerable research had been done by the Bureau of Ships during World War II and later, which has contributed a great deal to our knowledge of the oceans as applied to problems of submarine and mine detection.

BOTTOM—Sand dollars at 222 feet, animal tracks at 35 fathoms and boulder of alluvium rests in La Jolla canyon.





HEADQUARTERS—Woods Hole Oceanographic Institution is major facility on Atlantic coast. Shown here is institution and its fleet of research ships.

THE OPERATION of research ships has been sponsored along with the research. As a general rule, about one quarter of all research funds during the past 10 years has gone for the operations of ships, including maintenance and fitting out.

What does an oceanographic research ship do? In very broad and general terms, it studies: The currents of the ocean, temperatures, the development of instruments and techniques, contours, sediments and structure of the bottom, heat flow, sound transmission and speed, noises, biological activities and specimens, radio activity, and water samples for different kinds of chemicals.

To accomplish this somewhat formidable job, the nine laboratories described above are provided with some 16 ships ranging in size from the 12-ton dragger operated by Rhode Island U. to the 760-ton ATA *Allegheny* operated by Columbia University. Scripps operates the largest "fleet" of five vessels, consisting of two 505-ton ATAs, a purse seiner, a Coast Guard patrol vessel, and a yacht. Woods Hole has three: *Atlantis*, a 298-ton ketch; *Bear*, a coastal freighter; and *Crawford*, a 280-ton cutter. The most modern ship of this group is the trawler, *Gerda*, which was built in 1949 and is now operated by the University of Miami.

IN ADDITION to these ships in operation, three additional ships are being added to the oceanographic fleet.

USNS *Josiah Willard Gibbs*, an oceanographic research ship (AGOR 1), will serve as the principal research ship of Columbia University. USNS *Chain*, (ARS 20) converted from the former Navy salvage ship of the same name, will be used by Woods Hole. Another salvage ship is scheduled for alteration this year and will be used by oceanographers on the West Coast.

Gibbs is a 310-footer with a displacement of 2800 tons and a maximum speed of 18 knots. With accommodations for a crew of 48, plus 28 scientists, she will be used to study the physics of the ocean itself, and of sound in the ocean.

The large size of *Gibbs* permits additional space for scientific purposes. There are several large laboratories aboard which can be equipped with scientific gear. In addition, the ship can handle heavier weights at greater depths and provide greater stability for delicate scientific measurements than any U. S. oceanographic research ship now in use. In addition to the two main propellers, the ship also has an auxiliary propeller which will enable it to maneuver precisely at speeds from zero to four knots.

A special feature will be the largest and heaviest deep sea winch ever used by this country for oceanographic research. It is capable of handling up to 40,000 feet of wire rope and lowering and raising as much as 20 tons of equipment.

Gibbs was named after Professor Josiah Willard Gibbs (1889-1903), who is generally conceded to be America's greatest physicist.

Chain, placed in operation last year, about one month before *Gibbs*, is 210 feet long, has a displacement of 1800 tons and a maximum speed of 14 knots. Capable of working in the North Atlantic in winter, *Chain* has accommodations for a crew of 40, and 28 scientists. She carries among her oceanographic equipment: A large thermistor winch; three hydrographic winches with 20,000 feet of wire each; one deep-sea winch with 30,000 feet of wire; three small winches; and four laboratories.

MSTS has the operational responsibilities for the ships.

All this is not to suggest that the Navy does no research itself. The Navy Electronics Lab and the Underwater Sound Lab each operates an EPCE; the Hydrographic Office operates *YF 854* and two 2700-ton former seaplane tenders, *San Pablo* and *Rehoboth*.

Itemized in this fashion, it might almost appear as though oceanography was one of the major sciences of this country. It is; and it isn't.

The number of individuals involved and money spent is relatively insignificant; the results, enormous. It has been estimated by ONR that there are no more than 500 recognized oceanographers in the United States; no more than 2000 world-wide. Yet, within a generation, the amount of useful information they have made available is far out of proportion to their numbers. The basic research these scientists have already accomplished will take years to evaluate properly.

HOWDY *STRANGER*—Oceanographic research ships like *Stranger* serving with Scripps Institution's fleet are continually studying mysteries of the sea.

BY THE TAIL—Bomb is pulled up and loaded on board EODT's landing craft.

TIME OUT—R. Parker, GMC, takes a breather after a hard day's work.

EOD Team on the Job

WORLD WAR II ENDED almost 14 years ago, but the U.S. Navy's Explosive Ordnance Disposal Team operating out of the Naval Ordnance Facility at Yokosuka, Japan, still faces vivid evidence of the conflict. The team's job is removing remnants of WW II ordnance that could still be deadly.

The team spotted some ordnance during a two-month search of Briggs Bay last September and began the job of removing 12 mammoth Japanese bombs about 100 yards from the base. The bombs weighed as much as 3300 pounds each.

Seabees from Amphibious Construction Battalion One operated the crane barge off which the EOD men were working. The EOD team, all second class divers, was made up of LTJG John P. Ellis, Richard Parker, GMC, John De Hahn, MNC, and John H. Briody, BM1.

Red buoys, each tied to a different bomb, marked the location of the projectiles which were submerged in about 35 feet of water. Although the largest bomb contained some 500 to 600 pounds of explosives, the EOD team figured there was little probability they would explode. But they were taking no chances.

Chief Parker got into a rubber diving suit, strapped on his aqualung, and jumped flippers-first into the bay. He located the bomb at the bottom of the bay and worked the cable he had carried with him toward the nose of the projectile. The sea bottom was muddy and it was like reading by Braille. With his bare hands he felt the rough barnacled surface of the bomb, and finally managed to wrap the steel cable several times around the casing. This done, he returned to the surface and was handed the end of another cable which he wound around the bomb.

Seabees attached the crane hook through eyes at the ends of the cables. Slack went out of the cable and there was a strain as it inched upward. A few more inches and the crane was beginning to tilt and creak as the strain increased from the bomb which was sticking obstinately in the mud.

The list on the barge eased a little as the bomb slithered out of the mud. It wasn't long before it appeared, tail-first, out of the water. Fully exposed, it measured about 10 feet from its projectile-head to fins. Like the others, it was taken out to sea and dumped.

—Story by E. D. Ormsby, JO2, USN

—Photos by F. E. Henderson, AA, USN

BOMB RESTS in LCM on trip to sea. *Above:* Off and under to look for bombs.

Davy Jones Has Noisy

DURING THE EARLY DAYS of World War II, USS *Permit* (SS 178) recorded in her log: "Picked up unusual noise . . . could see nothing through periscope on that bearing. Sounded like hammering on steel in a non-rhythmic fashion accompanied by porpoise noises. Headed for sound. At times could be heard through 360 degrees."

A week later, USS *Tarpon* (SS 175) reported: "Noises which sounded as if the deck grating over the boat storage had been lifted and dropped three times. Shortly thereafter, sound heard echo-ranging from two ships bearing in the direction of the Gulf (Albay, P. I.), but no propeller noise was heard. Nothing in sight through the periscope."

USS *Salmon* (SS 182) "heard screws dead ahead. Nothing in sight."

Other submarines told of encountering the gamut of sound ranging from: Mild beeping, clicking, creaking, harsh croaking, whistling, grunting, hammering, moaning and mewing, to the staccato tapping as of a stick rapidly and steadily drawn along a picket fence, of coal rolling down a metal chute, fat frying in a pan, the dragging of heavy chains. Only the limitations of the language prevented further description.

As might be expected, sonar operators were rapidly approaching the point where they huddled in dark corners chewing their fingernails and starting violently when anyone spoke to them—even kindly.

The first break in this symphonic madness came when it was noted that serious variations in noise levels in waters near Fort Monroe occurred during the dawn and dusk listening periods. A "strangely loud background noise" occurred in early spring when croakers were known to tune up.

With this as a clue, investigators from a number of aquariums and laboratories were able to reassure submariners that their sonarmen were not suffering from excessive ear fatigue. Marine animal sounds, they said, were not only widespread, but "a source of significantly high background."

THE MATTER was not merely academic. It was rumored that mines planted inside the Great Barrier Reef of Australia by enemy raiders had been exploded by sonic fishes. The noise made by a single toadfish was measured on the North Carolina coast and it was apparently loud enough to detonate the type of acoustic mine then being prepared by the Navy for use in the Pacific. A double-actuation mechanism had to be developed for protection against such biological interference. *The silent sea was no longer silent.*

(It might be mentioned here that, even with the limited resources then available, the U. S. Navy was still able to determine the causes of these sounds two important years before Japan came to the same conclusion. Not until late 1944 did a prominent ichthyologist from Tokyo Imperial University discover the biological source of the sounds which were causing as much trouble to the Japanese fleet as to us.

Even though U. S. scientists were learning more and more, information was not immediately available to explain the phenomena or to predict when and where these sounds might be met again. In 1942, so little was

NOW WE KNOW that sea creatures are noisy. They are a source of frustration to sonarmen as well as fishermen.

Neighbors

understood of the underwater noisemakers that a list of all known (world-wide) forms of marine life producing subsurface sound included only 14 families of fishes and 17 families of shellfish. Descriptions were mostly in broad terms such as "nasal whine," "loud grunt," or "hoarse croak." Magnitude and frequency had not been measured, and much was merely hearsay.

This wasn't enough. The Navy had to know the methods of sound production by different species, the character of the sounds, the regional and seasonal variations, and the conditions under which they were produced.

Detailed research had to wait until after the end of the war, but between 1949 and 1954, 62 species of temperate coastal fishes, 105 subtropical and tropical fishes, 20 shellfish and two species of mammals had been auditioned. This was not simply a matter of sitting down and listening to the little creatures speaking their pieces. Hydrophones (underwater sound detectors) and tape recorders monitored the reactions of specimens when fed, annoyed, frightened, crowded, drawn into competition and otherwise stimulated. A reference file was established which will eventually, it is hoped, include the characteristic sounds of all important marine species.

IT WAS LEARNED that although fish have no organ developed solely for the production of sound, nature has modified various organs to accomplish the same purpose. Quite often the air bladder or swim bladder becomes a sort of resonator or soundbox. Sometimes muscles are embedded in the air bladder and, by contraction, set up vibrations of walls and gaseous contents; sometimes slender muscles connecting the bladder to the vertebrae vibrate like violin strings. This helps to explain the muffled grunts of rock hinds, the sustained resonant rumbling of groupers, growling of trunkfish, drumming of croakers and the tom-tom beating of sea catfish.

Others scrape bone against bone to produce sound. The sculpins of northern waters produce a dull droning, buzzing or long continued rumbling sound (something like a generator hum) with their pelvic bones; the king-size ocean sunfish grates its teeth. Puffers and burrfish manage long bursts of nasal croaking by rubbing together their upper and lower plates, and the sharp whining swish and chirp of filefish also come from the mouth—in this case by special transverse grooves in the uppers.

Each species, it has been found, has a characteristic range of sounds. These sounds are so characteristic with respect to range limitation, harmonic quality, duration and repetition rate that an experienced listener can soon learn to recognize the various sources—much like the expert birdwatcher can recognize a long list of birds from their calls.

The volume of sound appears to have a direct relation to the intensity of stimulation as well as to the size of the soundmaker — which seems only reasonable. Toadfish, for example, have been found to be somewhat louder in the open sea than when in laboratory tanks.

MOST SPECIES USE sound of one kind or another as a means of communication, as an expression of fight or fright, for defense or offense, as a response to changes in the environment, or as a means of orientation. A large portion of the noises heard, however, simply results from eating—a situation frequently known to exist in human society. Rays, for example, may be found by a loud crackling as their pavement-like teeth crush shells on the bottom, and hydrophones in shallow water populated by cunners may pick up constant clicking and chirping, which are chewing sounds.

Again, as in human society, the period of greatest noisemaking is frequently connected with social affairs and with the preservation of the species. Since spawning habits are known, the biologist can usually predict dates and locations of fish concentrations. Although the sound of an individual may be insignificant, the combined output of a school results in considerable volume. One drumfish croak, for example, may not reach more than 50 feet; however, a nighttime chorus of spawners has markedly raised the general background level of a large bay

FACT-FINDING—Personnel of Navy's Underwater Sound Laboratory run an experiment from their floating lab.

over the audible frequency range. The characteristic drumming, which sounds like a pneumatic drill working through concrete, may very well mask the sound of a slow-moving submarine.

Fortunately, croaker noises and that of many other fish, are restricted to a comparatively low and narrow frequency band. Experiments have shown that the sounds of most North Atlantic species can be almost eliminated by filters.

Shrimp noises frequently cause sonarmen to act the way they do. The shrimp have been found during certain seasons to reduce sonar ranges by as much as 40 per cent and seriously mask the sounds of torpedoes and cavitating subs.

Here again, the marine biologist offers practical advice: Shrimp and the equally noisy squilla can be expected in waters with coral, rock, stone or shell bottom almost anywhere around the world between 35 degrees North and 35 degrees South. But, he warns, if the noise you hear under these conditions comes from a depth greater than 30 fathoms, better tear out of there. It isn't shrimp.

However, one class of marine fauna simply does not lend itself to such neat classification. About the only useful information the biologist can offer concerning porpoises and whales is that they like submarines. Inquisitive and gregarious, they have at times followed their newfound friends for miles, sounding off with assorted false propeller noise, phantom echo-ranging pings and miscellaneous pings. This has frequently caused the sub and porpoise friendship to become unilateral.

PLANNING A VOYAGE?—Navy's Hydrographic Office has on issue more than 4400 standard nautical charts.

Pioneer: Navy Hydrographic Office

NO DISCUSSION of oceanography will ever get far before it runs into rocks and shoals if it does not include mention of the U.S. Navy Hydrographic Office.

Founded in 1830 and given early impetus by Maury's wind and current charts first published in 1847, Hydro has led the world in its contributions of deep sea soundings and bathymetric charts ever since 1922. It was in this year that the Navy developed the first practical sonic sounding machine and two destroyers obtained a complete profile of the ocean's bottom along their track in a cruise across the Atlantic and through the Mediterranean.

Aerial photography was used for the first time by the Hydrographic Office that same year in conducting surveys of the coast of Cuba.

Throughout the years, Hydro has been engaged in various scientific fields. These include studies in meteorology, investigations in terrestrial magnetism, marine surveying, oceanography, cartography, photogrammetry, aerial photography, marine geography, engraving and printing. Some of these areas have become so highly specialized that new government organizations have been established for the exclusive study of these sciences.

Long-range over-water aviation, development of radar, loran, and other electronic devices for navigational purposes, new systems and methods of computing fixes from celestial observations, the oceanographic research demanded for modern antisubmarine and amphibious warfare—all have influenced the activities and functions of Hydro.

The mission of the Hydrographic Office is enough to make strong men tremble:

To collect, evaluate, compile, produce and distribute accurate and timely hydrographic, oceanographic, and aeronautical information, including nautical and aeronautical charts and publications calculated to afford the maximum possible navigational safety and facility to ships of the Navy, Coast Guard and Merchant Marine, and to naval aircraft operating over areas of strategic interest to the Navy.

And: To produce special charts and related publications for use of the Navy and its operating forces, for training and operational purposes, including those for amphibious, air and undersea warfare.

And: To produce special hydrographic, oceanographic and aeronautical charts and related data in cooperation with the Army and Air Force to meet the needs of joint operations, and further to meet the requirements of the Joint Chiefs of Staff in support of war plans.

And: To serve as the Navy Department repository of record of technical source material relating to hydrographic, oceanographic, cartographic, magnetic, geodetic and gravity matters; and, further, to serve as the principal agency of the Navy Department to administer, regulate, and manage the exchange of such material with the Army Map Service, the Aeronautical Chart and Information Center, the Geodetic Survey, and other departments.

If that wasn't enough to make any branch of the Navy feel it had earned its salt, the Office has on issue more than 4400 standard nautical charts of the world's navigable waters; 68 volumes of Sailing Directions presenting textual and graphic descriptions of foreign harbors and coastlines; and other services dealing with hydrographic, oceanographic and meteorological information.

Hydro, needless to say, is busy.

UP-TO-DATE information keeps ships on course. *Rt:* Navymen in Hydro's Yokosuka branch check chart supply.

NAVY DIVING QUALS

WHAT'S THE DIFFERENCE between a Scuba, Master, First Class, Salvage, or Second Class Diver? And how about pay—do qualified divers receive any added compensation? Or what?

Here's a rundown on the Navy's various designations and details concerning special pay for diving duty.

Briefly, all divers fall into one of two categories, depending upon the type of diving equipment they use. Those that use self-contained breathing apparatus are often referred to as "free swimmers" and are classed as Scuba divers. The others, those who use special helmets or diving suits and receive air from the surface, come under the surface-supplied category. This includes shallow-water as well as deep-sea diving.

Shallow-water diving is made by those who dive to depths less than 36 feet and use a helmet or diving suit that receives air through a hose from the surface. Deep sea diving is made by men who dive to depths greater than 36 feet and receive their air through a hose from the surface.

The Navy has three different deep sea diving classifications. They are Master, First Class and Second Class Diver. These different ratings are assigned to men according to their degree of qualification. These qualifications are spelled out in detail in Article C-7408, *BuPers Manual.*

Master Divers are the Navy's leading divers. They are designated by the Chief of Naval Personnel only, in accordance with the needs of the service and with the recommendations of the individual's commanding officer and a special selection board. To be eligible, any qualified Diver First Class must meet the following requirements:

- Be a Chief Petty Officer.
- Have served a minimum of two years with the designation and qualifications of a diver first class (this includes Scuba diver qualifications).
- Have served as a qualified diver for a minimum of 12 months aboard a helium-oxygen-equipped diving vessel (ASR), and a vessel equipped for ship salvage (ARS/ARSD).
- Demonstrate ability to take charge of all phases of helium-oxygen diving (see page 61).
- Demonstrate ability to plan and take charge of all diving operations.
- Demonstrate ability to take charge of operation and maintenance of a submarine rescue chamber.
- Demonstrate knowledge of all Navy-procured types of self-contained underwater breathing equipment, including their advantages and limitations.
- Know the methods and materials used in unbeaching ships on strand under various conditions of beach, sea and water; and refloating sunken vessels.
- Understand the principles of the General Gas Law and its derivatives (Boyle's and Charles' Law); understand the principles of Dalton's Law of partial pressures and Henry's Law of fluid saturation; understand the theory of inert gas saturation and desaturation of body fluids and tissues; understand the principles involved in the computation of various decompression tables; recognize the different forms of decompression sickness and know the required treatment of them.
- Understand the effect upon the respiratory system of such poisonous gases as may be encountered in diving, and know the treatment required.
- Know the name and use of equipment required for safe diving operations.
- Know the causes, symptoms, treatment of, and preventive measures for all types of diving accidents.
- Have a comprehensive knowledge of the scope, content and application of Navy publications and instructions pertaining to diving such as the *Diving Manual* (NavShips 250-538), and applicable sections of the *Bureau of Ships Manual, Manual of the Medical Department* and *BuPers Manual.*

With all of these qualifications, Master Divers are required to direct

ON DECK—Dressers attend to students as they prepare for test dive into muddy Anacostia river at School for Deep Sea Divers in Washington, D.C.

other divers in underwater salvage, repair, construction, demolition, recovery and rescue work. They must supervise personnel during diving operations from topside or underwater as necessary. When not serving in this capacity, Master Divers often survey the job themselves to determine the most effective method of accomplishing the task, especially when the depth of water is greater than 150 feet.

It is also the job of the Master Diver to see that all divers under his supervision are properly trained and that they keep up to date on the latest techniques and maintenance of all types of diving gear and associated salvage, rescue and repair equipment.

They also treat personnel who are afflicted with maladies common to diving, such as caisson disease.

Master Divers are assigned a primary job code number for an Underwater Mechanic—ESM-5311-Master Diver. So long as they remain on diving duty and keep up their qualifications, Master Divers receive $33 per month diving pay in addition to their basic pay and allowances.

All Navy deep sea divers, regardless of their rank, rate or diving classification, are also paid an extra $5.50 for each hour or fraction of an hour when engaged in actual salvage or repair operations in depths over 90 feet. This $5.50 hourly rate is also paid for dives in depths less than 90 feet when the officer in charge determines that extraordinary hazardous diving conditions exist.

Divers First Class are deep sea divers, trained, qualified and designated at the U.S. Naval School for Deep Sea Divers, Washington, D.C.

They are responsible for underwater salvage, repair, construction, demolition, recovery and rescue work at depths greater than 150 feet. They must be able to operate underwater hand and power tools, gas and electric cutting torches, and electric welding equipment.

They are also required to lay out beach gear for hauling off stranded vessels, rigs for lifting submerged objects by washing tunnels and reeving lines, wires or chains under the object; enter submerged vessels to perform salvage or repair work; connect air hoses to submarines during salvage operations; operate and maintain diving gear and associated salvage, and repair equipment.

Divers First Class receive an extra $20 per month so long as they remain designated as such and are assigned to diving duty. In addition, they receive two cents per minute during any dive for which they do not receive the $5.50 hourly rate; and five cents per foot of total depth of dives over 120 feet or equivalent pressure. The amount payable to Divers First Class at the two cents per minute and five cents per foot rate is limited to $13 per month.

(There are over 200 ***Salvage Divers*** in the Navy today who are being phased into the Diver First Class Program through 13 weeks of "cross training" at the U.S. Naval School for Deep Sea Divers. All Salvage Divers must attend this course and convert to Diver First Class by June 1962 or revert to Diver Second Class.)

Divers Second Class are trained, qualified and designated by commands authorized by the Chief of Naval Personnel.

WHAT'S IN A NAME

Underwater Jeep Drivers

One night back in 1954 USS *LST 291* was churning her way through the waters of the Great Bahamas after completing two weeks of amphibious training exercises at Vieques, Puerto Rico. On her decks she carried 114 vehicles and 56 tons of equipment.

About 1800 yards off James Point, Eleuthera Island, a resounding crunch shattered the silence of the night. The LST had hit a submerged coral reef, which tore a two-foot hole in her evaporator room and twisted, warped and gashed her hull at many other points. Water poured in through the openings to flood all of the lower compartments. Personnel were ordered over the side. Before long two DEs arrived to take them off the island to which they had gone after the grounding. A volunteer salvage party was left with the ship.

The first step in the salvage operations was to flood all compartments. This was done to increase the weight of the ship and prevent further damage from the heavy seas which had been driving her closer to the beach and scraping new holes in her bottom.

When frogmen from Underwater Demolition Team Two reached the scene they began a survey. In spite of a 25-knot wind and far from ideal weather conditions, they made a mass underwater swim, in Scubas, to explore a reported channel across the reef. They found a shallow channel, but revealed that it was obstructed by coral pinnacles up to 100 feet in diameter. These would have to be blasted out of the way before the ship could be brought off.

About 400 pounds of explosives were used in the first effort. More was rushed in by sea and air, and the channel began to take shape. While the frogmen blasted, utility landing craft from two LSDs were busy removing cargo, and salvage operations aboard the LST, directed by Commander Robert K. Thurman, USN, had also gotten under way. Divers flown in from COMSERVLANT or furnished by salvage ships, carried out this part of the job. Large amounts of grease, oil and gasoline in the water made the going rough for them.

During the salvage operations, vehicles in the ship's flooded tank deck had to be removed. As a result, two of the divers found themselves qualifying as "underwater jeep drivers."

To do this, the underwater motorist would seat himself behind the wheel of a submerged vehicle. Then, while a heavy crane pulled, he would steer the jeep into position beneath a hatch so that the crane could lift the car out. This went on until all the jeeps were removed from their underwater parking lot.

After 11 days of hard work the LST was finally ready to be filled with compressed air and refloated. By then the frogmen had blasted out a 1000-foot channel, the cargo had been salvaged and the holes and gashes in the hull had been patched.

A towline was attached to the salvage ships, USS *Discovery* (ARS 43) and *Opportune* (ARS 41). Then landing craft began washing heavy streams of water under the LST's stern to move her off the ledge which held her. After a few tense moments when the towline caught on a coral pinnacle and the LST almost got out of the channel, the ship at last floated clear of the reef and turned on her running lights.

The UDT men, the ships that had come to the LST's aid and the salvage crew—including the underwater jeep drivers—had completed their task.

To qualify as a Diver Second Class, an individual must graduate from the six-week qualification course and:

- Understand the care, preservation and use of all air diving equipment such as compressors, hose, helmets, suits and Scuba.
- Test, repair and adjust all air diving equipment and determine whether they are safe for use.
- Know the nomenclature of diving equipment and function of component parts.
- Dress and tend diver expertly.
- Know standard diving signals; know the instructions for keeping diving log and entries required.
- Understand the theory and practice of decompression and use of the decompression table; know the cause, symptoms, treatment and prevention of air embolism; know the dangers of oxygen poisoning during the administration of oxygen under pressure, its usual symptoms, warnings and treatment.
- Demonstrate the back-pressure armlift method of manual artificial respiration.
- Have knowledge of first aid related to the treatment of common diving accidents.
- Know the physics of diving.
- Know the methods and procedures employed in searching for and recovering objects on the bottom.
- Know how and when to use a recompression chamber; know how to administer oxygen properly for treatment purposes.
- Demonstrate practical application of marlinespike seamanship to diving operations.
- Perform work at depth of 50 feet of water for one hour—this to constitute a qualifying dive.
- Know the contents and use of the *Diving Manual.*
- Estimate an underwater situation and give an intelligent description of same.
- Care for and operate Navy standard rescue breathing apparatus.
- Use oxygen-electric torch underwater.
- Use and know the advantages, limitations and safety precautions of open-circuit demand Scuba.

Divers Second Class receive $13 each month in addition to their basic pay and allowances so long as they remain qualified and are assigned to diving duty. They also receive the extra two cents per minute and five cents per foot for dives that do not qualify for the $5.50 hourly rate, but not to exceed $20 per month.

All divers are required to requalify every six months or else lose their designation. Master and Divers First Class are required to make four requalification dives in depths of 150-170 feet; 170-200 feet and over 200 feet; while Divers Second Class must make a series of four dives at any depth up to 150 feet.

Qualified divers are authorized to wear a distinguishing mark on the right sleeve of their uniforms. It consists of a diving helmet and breast plate with the letter "M" for Master, the letter "S" for Salvage Diver, and the figures one or two, for First or Second Class Diver, centered on the breastplate of the diver's insignia.

Scuba divers do not have any special distinguishing mark nor are they authorized to draw special pay for diving.

In addition to the special pay for diving duty explained above, some divers are entitled to an extra $55 per month incentive pay for the performance of hazardous duty. This includes:

- Master and Divers First Class who are assigned to duty (aboard ASR) involving the use of helium-oxygen for a breathing mixture in the execution of deep sea diving.
- Duty at a submarine escape training tank, when such duty involves participation in the training.
- Duty at the Naval School for Deep Sea Divers or the Navy Experimental Diving Unit, when such duty involves participation in training. —H. George Baker, JOC, USN.

Under the Seas

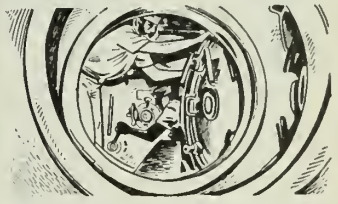
A publication has recently become available which should enable you to understand your submarine Navy better.

The Complete Book of Submarines by CAPT William C. Chambliss, CDR Charles W. Rush, Jr., and CDR H. J. Gimpel tells the story of the submarine from its beginning through the modern nuclear boats. The authors tell of the training that makes submariners, and relate man wartime exploits of our underseas crafts. They also probe into the future and discuss the possible commercial uses of subs.

HERE'S YOUR NAVY

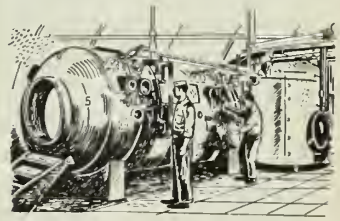
The U. S. Navy has always been interested in diving—but it has been investigating deep-seo diving problems since 1912. By 1925 the experiments had grown to such an extent that the Experimental Diving Unit was set up as a permanent activity under the Bureau of Construction and Repair (now BuShips). The EDU is located at the Naval Gun Factory, Washington, D. C.

One of its principal items of laboratory apparatus in diving research is the pressure tank and re-



compression chamber unit. This consists essentially of three sections: the wet tank, with the dry tank (or igloo) above it, and the recompression chamber. All sections are capable of withstanding internal pressures up to 350 pounds per square inch (785 feet of sea water).

In operation, the vertical cylindrical wet tank is filled with water to a depth of about seven feet. Divers enter by way of the igloo and the wet tank hatch. The wet tank is then sealed shut, or (depending on the type of dive) the wet tank and igloo are



operated as a single unit or lock. In either case, air is admitted to the space above the water to build up pressure to simulated depths of up to several hundred feet.

Three line officers, three medical officers and 18 enlisted divers at EDU are at present working on more than 20 continuing projects. Several of these pertain to the physiological aspects of diving. Others include equipment development and evaluation, extending the limits of helium-oxygen diving, and underwater television.

The unit maintains a small but well equipped laboratory containing many types of gas analyzing equipment and other instruments which assist in diving-physiology studies. There are also a carpenter's shop, metalsmith's shop and machine shop.

Here's List of Instructions and Schools for Underseas Sailors

THE NAVY under the sea covers a lot of ground. And for men who work in this part of the Navy, there's a lot to learn. This knowledge is picked up from Navy training courses, Navy schools, and from various instructions and manuals.

Here's a rundown where pertinent information about this phase of the Navy can be found. A list of schools is also included. Note: This is *not* a complete list. For additional training, see your Education Officer. For general information see BuMed, BuPers, BuShips, diving manuals.

DIVING

SOURCE	SUBJECT
BuPers Manual	
Article C-7313	Officer qualifications for Scuba training.
Article C-7314	Officer qualifications for deep-sea helium-oxygen diving.
Article C-7315	Qualifications for Salvage Diving Officer.
Article C-7408	Diver qualifications.
Article C-7418	Qualifications for enlisted Scuba divers.
Article A-4202	Diving pay.
BuMed Manual	
Article 15-30	Physical requirements for deep-sea and Scuba divers.
BuPers Inst. 1500.15C	Selection and training of candidates for diving duty.
BuPers Inst. 1500.36	Mobilization planning guide for Diver's Second Class schools.
BuPers Inst. 1520.4D	How to apply for officer deep-sea diver's training.
BuAer Inst. 9940.1	Use of self-contained underwater breathing apparatus (Scuba).
OpNav Inst. 9940.1B	Divers and their equipment.

UNDERWATER DEMOLITION (UDT)

BuPers Manual	
Article C-7305	Officer qualifications for Underwater Demolition Teams.
Article C-7406	Enlisted qualifications for Underwater Demolition Teams.
BuPers Inst. 1520.7	How to apply for underwater demolition training.
BuShips Inst. 3990.1	Underwater noise measurements of submarines.
OpNav Inst. 10126.3	Coral Shoe for use by Underwater Demolition Teams and Explosive Ordnance Disposal Units.

EXPLOSIVE ORDNANCE DISPOSAL (EOD)

BuPers Manual	
Article C-7306	Officer qualifications for EOD.
Article C-7407	Enlisted qualifications for EOD.
BuPers Inst. 1320.5A	Duty involving the demolition of explosives.
BuPers Inst. 1500.31	Mobilization planning guide for EOD schools.
OpNav Inst. 8027.1A	Responsibilities for EOD.
OpNav Inst. 8027.5A	Requirements for EOD equipment.
OpNav Inst. 8027.6	Naval responsibilities for explosive ordnance disposal.

SUBMARINES

BuPers Manual	
Article C-7303	Qualifications for submarine officers.
Article C-7304	Enlisted qualifications for sub duty.
Article C-7309	Qualifications for submarine medical officers.
Article C-7310	Qualifications for submarine engineering duty officer.
Article A-4301	Submarine pay.
Article D-1502	Submarine training for officers.
BuPers Inst. 1520.6G	Application for officer submarine training.
BuPers Inst. 1540.2C CH-1	Assignment of enlisted personnel to initial submarine duty,
OpNav Inst. 3360.11	Training policy for ASW personnel.

OCEANOGRAPHY

SecNav Inst. 5430.33	Navy's responsibility for the provision of oceanographic services to the Department of Defense.
OpNav Inst. 9010.130	Approved characteristics of Oceanographic Research ship (AGSI.

SCHOOLS (Submarines)

Catalog of *U.S. Naval Training Activities* and Courses.

Page 53	Submarine Periscope repair (8 weeks), at U.S. Naval Opticalmen Class A school, Great Lakes, Ill.
Page 78 & 95	Torpedoman's Mate (class A) course (10-19 weeks), Key West, Fla. and San Diego, Calif.
Page 74	Underwater cutting and welding (6 weeks) at San Diego, Calif.
Page 78	Advanced Undersea Weapons School at Key West, Fla. Courses range from 2 to 19 weeks.
Page 86	U.S. Naval Schools, Mine Warfare, Yorktown, Va. Courses offered are: 1. Submarine Mine Warfare Familiarization (officer), 1½ weeks. 2. Submarine Mines Maintenance (officer), 6 weeks. 3. Submarine Mines Assembly (class C), 6 weeks. 4. Submarine Automatic Degaussing (class C), 6 weeks.
Page 95	U.S. Fleet Submarine Training Facilities, San Francisco, Calif.
Page 97	U.S. Naval Submarine School, New London, Conn.

SCHOOLS (Diving)

Page 79 (see also BuPers Inst. 1500.25E)	U.S. Naval School, Deep Sea Divers, in Washington, D.C. Courses offered are: 1. Diving Officers, 26 weeks. 2. Diving Officers, 10 weeks. 3. Salvage Officers, 16 weeks. 4. Salvage Officers, 5 weeks. 5. Medical Officers, 8 weeks or less. 6. Medical Deep Sea Diving Technician (enlisted), 27 weeks. 7. Divers "Cross-Training" (a) Deep Sea Diving (13 weeks). (b) Salvage Diving (7 weeks). 8. Divers, Second Class (enlisted), 6 weeks. 9. Divers Refresher (Master, First Class, Deep Sea, and Salvage Diver), 10 weeks or less. 10. Helium-oxygen divers refresher (officer and enlisted), 2 weeks. 11. Divers requalification (Master, First Class, Deep Sea, Salvage, and Diver Second Class), 2 weeks or less.
Page 91	Scuba Divers School (officer and enlisted), 5 weeks at Key West, Fla.

BOOKS

FOR THOSE INTERESTED IN UNDERWATER READING

DO YOU LIKE READING about a fascinating, adventurous subject? Whether your interest in the world under water is as a professional, a trainee, a sportsman or a hobbyist, you will find many books to give you pleasure and information. The books listed below are among many available in your ship and station libraries.

Underwater Diving—Techniques

Handbook for Skin Divers—Bronson-Howard; 1958. Handy self-reference written for persons interested in skin diving.

The Science of Skin and Scuba Diving—Conference for National Cooperation in Aquatics; 1957. A valuable guide for adventuring with safety underwater.

Free Diving—Rebikoff; 1956. Describes self-contained underwater breathing apparatus, techniques and available equipment.

Shallow Water Diving and Spearfishing—Schenck & Kendall; 1954. A primer for the sportsman and hobbyist.

Skin Diving and Exploring Underwater—Sweeney; 1955. A professional diver and former Navy instructor's "how-to" book with detailed information on equipment and its use.

The Complete Manual of Free Diving—Tailliez; 1957. Authoritative technical manual by French naval underwater research group.

Underwater Sport—Vanderkogel & Lardner; 1955. Pointers on what you can and cannot do under water.

History, Exploration, and Adventure Below

Half Mile Down—Beebe; 1951. History of diving and underwater explorations.

Silent World — Cousteau; 1953. Fascinating account of the blue twilight seascape.

Danger is My Business — Craig; 1938. Autobiography of a deep sea diver.

Treasure-Diving Holidays — Grile; 1954. Underwater adventures in the West Indies and Mediterranean.

The Undersea Adventure — Diolé; 1953. A sea explorer's philosophical observations on marine life and psychology of diving.

4000 Years Under the Sea—Diolé; 1954. Diving for ancient treasures, mostly from Mediterranean civilizations.

Man Under the Sea—Dugan; 1956. Man's underwater exploits from primitive to present times.

Men Under the Sea — Ellsberg; 1939. Navy underwater rescue and diving experiences.

Deep Down Under — Floherty; 1953. Diving for salvage, construction, pearling, sport by frogmen, aqualungers and mask and finners.

Diving to Adventure—Hass; 1951. Water hunting and photographing underwater life.

2000 Fathoms Down — Huout & Willm; 1955. Story of two pioneers in a free moving bathyscaph.

Man and the Underwater World—Latil & Rivoire; 1956. History of man's attempts to penetrate the sea from the time of ancient Greeks to the bathyscaph.

Fathoms Below — Meier; 1943. Underwater salvage from sailing ships to *Normandie*.

Earth, Sky and Sea—Piccard; 1956. A scientist-adventurer in bathyscaph and balloon.

The Blue Continent—Quilici; 1954. Dangers and fascinations of aquatic big game hunting in the Red Sea.

The Underseas Navyman—World War II and After

Combat Beneath the Sea—Brou; 1957. Underseas war of all countries, describing swimmers, demolition teams and ordnance disposal squads.

Sea Devils—Borghese; 1954. True story of daring "human torpedoes" in Italian Navy's suicide corps.

The Big Dive—Crossen; 1959. A suspense novel based on the actual disappearance of a British frogman.

No Banners, No Bugles—Ellsberg; 1949. Salvage diving in the Med.

WAY BACK WHEN

Straight Down and Still Going

On a hot day in August 1913, the battleship USS *Nebraska* (BB 14) was holding torpedo practice in Guacanagabo Bay, Cuba. Instead of coming to a stop at the end of their run where they were supposed to float until recovered, most of the torpedoes kept right on going. One, it was noticed ran for a considerable distance, then sank in 120 feet of water.

In *Nebraska*'s recovery launch was the diving officer, Chief Gunner C. J. Miller, USN. With him were men dressed in diving gear whose job it was to locate sunken torpedoes. Within a short time the launch was over the spot and the Gunner sent a man down to survey the situation.

The diver came up on his own accord and informed Gunner Miller that "the torpedo was on its way to h---" (the mud being very soft), that he "could only see the tail and that the propellers were still turning over."

Armed with a shovel the diver went down after the torpedo. He worked for over an hour before he was hauled up, exhausted from his strenuous work. He informed the diving officer that he had dug a hole 20 feet deep and that the torpedo was still underway.

A relief diver went down. About a half-hour later he asked for a heavily weighted five-inch line to be sent down. This was made fast to the tail of the torpedo. The diver came up and informed Gunner Miller that he had put a timber hitch on her as he could only get one turn. The Gunner said that was enough.

Windlass and funnel were shipped and they hove the launch down to one inch freeboard. But it was no go. *Nebraska*, meanwhile, was maneuvering close by and the OOD suggested passing the hawser to the ship. It was rove through her hawsepipe and a turn taken around the winch.

The first few turns straightened the line out taut to such an extent that the ship's head was swung around by the tension. Another few turns and the torpedo shot out of the water 10 feet from the ship.

The elusive torpedo and the launch were taken aboard.

Under the Red Sea Sun—Ellsberg; 1946. Wartime underwater salvage in Africa.

The Naked Warriors — Fane & Moore; 1956. U.S. Navy frogmen from Tarawa to the present.

Ordeal by Water—Keeble; 1958. Salvage operations in the Mediterranean.

Epics of Salvage—Masters; 1954. Wartime feats of marine salvage men in World War II.

Frogman—Pugh; 1956. Story of famous British diver.

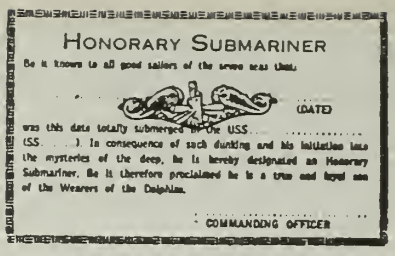
Frogmen — Waldron & Gleeson; 1950. The story of the wartime underwater operators.

By Sea and by Stealth—Wilkinson; 1956. Underwater exploits by miniature submarines, frogmen and "sneak craft."

The Midget Raiders — Warren; 1954. The wartime story of human torpedoes and midget submarines.

Ocean World

Oceanography and Marine Biology—Barnes; 1959. A technical account of instruments, methods and results of ocean exploration including marine life, properties of water, underwater noise, photography and TV.


HONORARY SUBMARINER

Be it known to all good sailors of the seven seas that

(DATE)

was this date totally submerged by the USS ..... (SS ....) In consequence of such dunking and his initiation into the mysteries of the deep, he is hereby designated an Honorary Submariner. Be it therefore proclaimed he is a true and loyal son of the Wearers of the Dolphin.

COMMANDING OFFICER

The Living Tide — Berrill; 1951. Animal and marine life in Atlantic tidal waters.

Edge of the Sea—Carson; 1954. The intertidal world of plants and animals.

The Sea Around Us—Carson; 1951. An authoritative and skillful story of the sea, its islands, mountains and depths; and man's efforts to solve its mystery.

The Ocean River—Chapin & Smith; 1952. Popular study of the Gulf Stream.

Story of the Oceans — Douglas; 1952. An informal introduction to oceanography.

The Atlantic—Outhwaite; 1957. A history of the ocean.

The Pacific Ocean — Reesenberg; 1940. On the world's largest ocean.

The Book of the Sea—Spectorsky; 1954. Anthology of writings about the wonder, majesty and mystery of the sea.

The Oceans — Sverdrup; 1942. Their physics, chemistry and general biology.

Wild Ocean—Villiers; 1957. North Atlantic and the men who sailed it.

Submariners

Nautilus 90 North — Anderson; 1959. Story of the epic transpolar voyage.

Submarine!—Beach; 1952. U. S. submarines in World War II.

The Atomic Submarine and Admiral Rickaver—Blair; 1954.

The Hunters and the Hunted—Brennecke; 1958. German submarine warfare.

U-Boats at War—Busch; 1955.

Battle Submerged—Cope & Karig; 1951. Submarine fighters of World War II.

H. M. U-Baat—Drummond; 1958. Adventures of a German submarine captured by the British.

The Sea Wolves — Frank; 1955. The story of German U-Boats at War.

Twenty Million Tons Under the Sea—Gallery; 1956. Biography of the Nazi submarine U-505 captured by the U.S. Navy.

War Fish—Grider & Sims; 1958. Life of U.S. submarine crew in battle and on shore.

Sunk—Hashimoto; 1954. Story of the Japanese submarine fleet, 1942-1945.

Hellcats of the Sea—Lockwood; 1955. Submariners' "Operation Barney" when nine submarines invaded the Sea of Japan.

Sink 'Em All—Lockwood; 1951. Submarine warfare in the Pacific written by an expert.

Through Hell and Deep Water—Lockwood & Adamson; 1956. A biography of CDR Dealey, skipper of uss *Harder* and a history of his ship.

United States Submarine Operations in World War II—Roscoe; 1949. The big picture of subs in action.

The Complete Book of Submarines—Rush & others; 1958. Types of submarines and what goes into them.

U-Baat 977 — Schaeffer; 1953. Nazi skipper's version of his undersea operation.

Silversides—Trumbull; 1945. uss *Silversides*' adventures in the Pacific.

Undersea Patrol — Young; 1953. A first hand picture of World War II British submarine service.

Look Out for Synaceja

One of the most unusual passengers to travel aboard USNS *T-LST 618* was a *Synaceja horridis*. In plain English, that would be a stonefish.

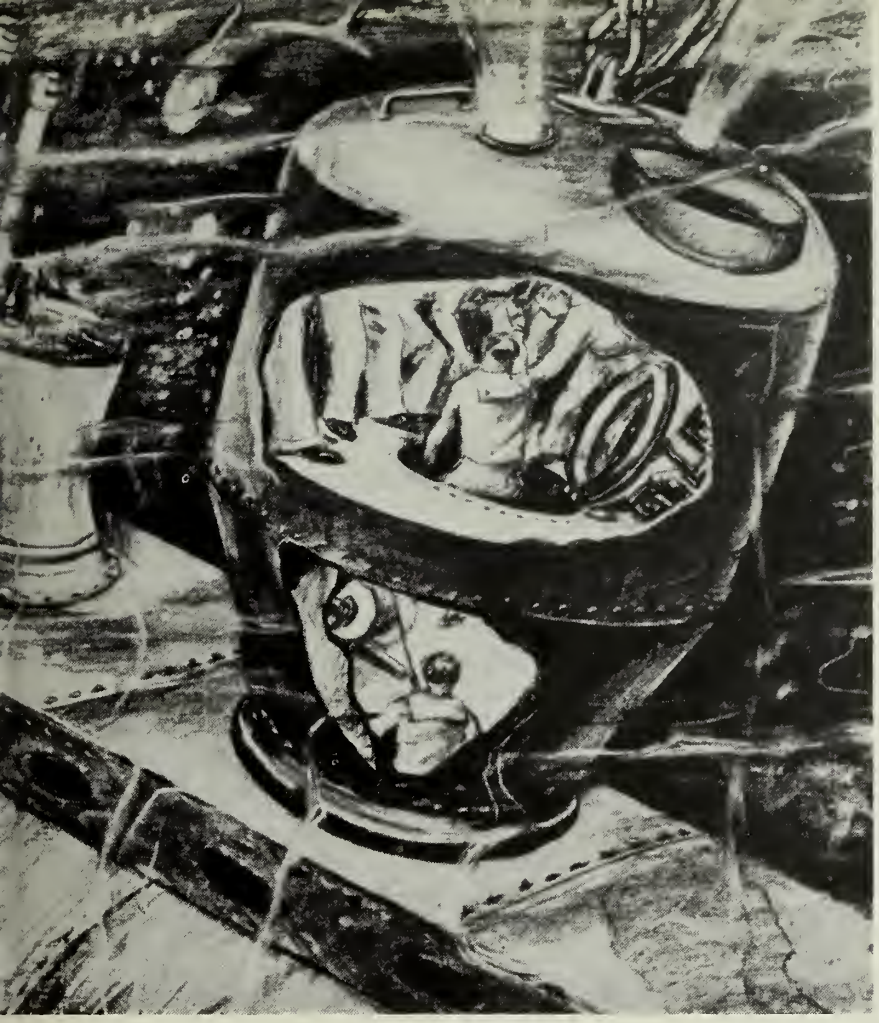
This unusual MSTS passenger was captured by a former crew member who was netting tropical fish when *LST 618* was operating in the South Pacific. It was discovered when a fishing companion accidentally stepped on it in a tidal pool. Luckily the man was wearing shoes, for the poison secreted from the dorsal fins of the stonefish are so fatal that there is but one recorded incident of man' surviving its sting. South Sea natives claim that the only remedy to forestall death is immediate amputation. The sting of the stonefish is classed with the bite of the bushmaster snake.

This is one more good reason for wearing swim shoes in tropical waters where coral abounds.

The stonefish is extremely ugly and has a funnel type mouth. Its eyes are vicious looking with white circles and are set on the top of the head very much in the same manner as those of a flounder or flatfish. They usually imbed themselves in small rocks or coral along the ocean floor and are just about invisible. They diet on fish and marine plant life.

Live specimens of this deadly fish were all but non-existent in the U.S., until "Rocky," as the *Synaceja horridis* was named by LST crew members, arrived in the States. He was donated to the Steinhart Aquarium in San Francisco's Golden Gate Park where he is now on display and under study.

WHAT'S-IT — 'Rocky' floats through water like butterfly using his under fins in flapping motion like wings.



UP FROM THE BOTTOM

Few ships have been sunk for months, raised and recommissioned, then gone on to fight a war. *Squalus* did. Redesignated as *Sailfish*, she survived 12 war patrols during World War II, won a PUC for sinking an aircraft carrier.

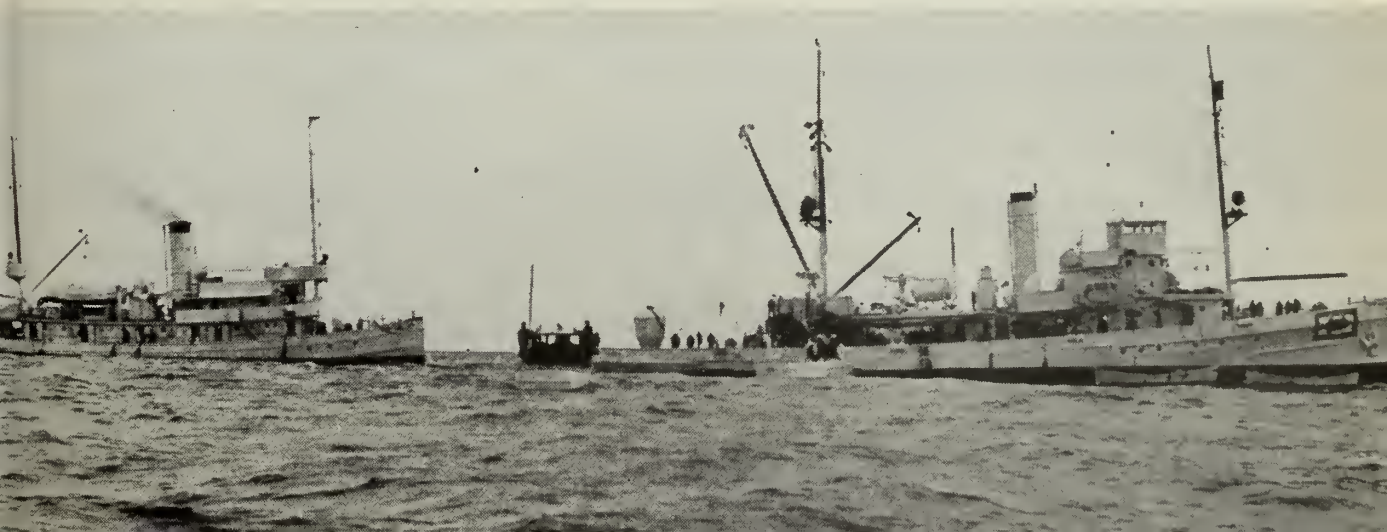
While on a practice run from her base at the Navy Yard, Portsmouth, N. H., USS Squalus *(SS 192, later designated as* Sailfish*), sank in the open sea on 23 May 1939. She went to the bottom because her high-induction valve failed to close, and through that 31-inch opening a great volume of water flooded the sub's after body.*

Squalus *had dived to 50 feet and was straightening out horizontally when the commanding officer, LT Oliver F. Naquin,* USN, *in the control room, was notified that water was coming into the ship. Ballast tanks were ordered blown instantly, but the boat could not obtain enough buoyancy to offset the dead weight of the water that flooded the four after compartments.*

The entire interior would have filled had not the door in the watertight bulkhead at the after end of the control room been closed through the quick and desperate work of one of the crew.

JUST BEFORE *Squalus* went under, her commander radioed Portsmouth that he was about to submerge for a run of an hour. When that time had passed by a considerable margin, and the boat had failed to report her return to the surface, USS *Sculpin,* (SS 191), a sister ship, was sent to investigate. She discovered a tell-tale

TOPSIDE TEAM—*USS Wandank* (ATO 26) and *USS Falcon* (ASR 2) prepare rescue chamber for lowering to *Squalus*.



BACK IN SERVICE—Extensively overhauled and recommissioned, *USS Sailfish* (SS 192) played big part in WW II.

smoke bomb floating on the surface, and then located a marker buoy that had been released from a well in the forward deck of *Squalus*.

That buoy carried a telephone circuit in the cable which linked it with the submarine; and the commanding officer of *Sculpin* was thus able to communicate with the survivors in the forward compartments of *Squalus*. The buoy cable parted within minutes after contact was made, but it was still possible for *Sculpin* and *Squalus* to maintain communications by tapping in Morse code with a hammer on the hull of *Sculpin* and hearing similar messages from *Squalus*.

USS *Falcon* (ASR 2, ex-AM 28) reached the scene of the disaster early the following day. She laid out four point moorings and divers from *Falcon* went aboard *Sculpin* to familiarize themselves with the layout and equipment to be found aboard *Squalus*, her sister ship.

SLIGHTLY LESS THAN 26 hours after *Squalus* sank, Martin Sibitzky, BM1, made the first dive and a few minutes later telephoned that he had landed on the forward deck of *Squalus* and that men inside her were tapping on her hull as they heard him walking overhead.

Sibitzky shackled the downhaul line of the rescue chamber to the forward escape hatch, and a little more than an hour later the chamber pulled itself down to the hatch. Adjustments were made and the two operators of the chamber descended through the lower compartment to open the exposed hatch to the torpedo room. LT Naquin named seven men to make the first trip—LT Nichols to inform *Falcon* of conditions inside *Squalus*, a test engineer and five enlisted men who were the weakest of the survivors.

Twice more that afternoon the bell repeated its journey, removing all but eight of the crew. In darkness the last trip was started, the last contact made with *Squalus* and the last eight men, including LT Naquin, taken aboard.

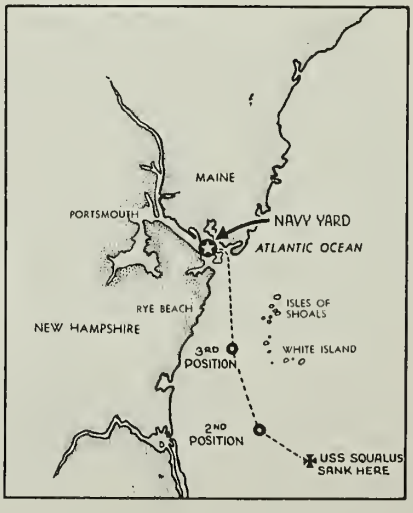
On this last ascent, the downhaul wire jammed when the chamber was 150 feet below the surface. Those inside could do nothing to release it nor could the chamber be pulled free by *Falcon*. Three divers successively went down into the dark and frigid deep and the last one finally succeeded in cutting the cable.

However, the chamber could not be allowed to rise free lest, with increasing speed, it should strike *Falcon* in its rise, to the disaster of the men in the chamber. The crew was ordered to give the chamber just enough dead weight by admitting water ballast to make it barely float—a dangerously difficult operation under the best of circumstances. Unfortunately, the chamber lost all buoyancy and sank back to the sea bed not far from the *Squalus* it had left only a short time before.

There, after juggling with the ballast, the chamber was given moderate dead weight and was then pulled to the surface, hand over hand, by the crew of *Falcon*. The chamber had started its fourth trip about 2050, 24 May, and was pulled alongside *Falcon* three hours and 48 minutes later. The emotions of the 10 men inside, as they stepped on the deck of *Falcon*, have not been recorded.

A FIFTH DESCENT was made the following day to the after escape hatch to determine whether or not anybody was alive in that flooded section. This, too, was a delicate business. After the chamber was secured to the escape hatch, the chamber was made to serve as a diving bell so that the escape-hatch cover could be eased open just enough to release a small volume either of pent-up air or water. Without first equalizing the pressure in the chamber with that of the sea the hatch cover would have been thrown open violently when released, which would have meant sudden death. *Falcon* could have given them no help.

Fortunately, the rescue crew met the situation with coolness and skill. When the hatch cover was slightly unseated, water oozed out—conclusive evidence that the 26 men trapped in the after section of *Squalus* were dead.

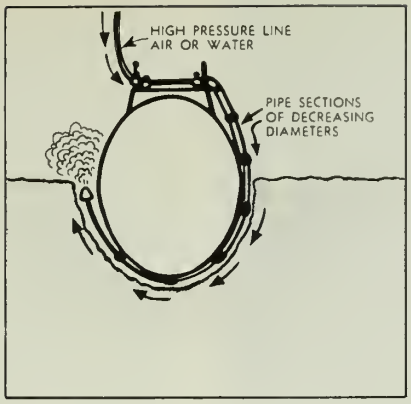


Submarine salvage was beginning to be a familiar story to Falcon, *then based at the naval submarine base, New London, Conn. She had been used to raise* USS S-51 *which had sunk off Block Island in 132 feet of water in September 1925, and in recovering* USS S-4 *which went down off Provincetown, Mass., in 102 feet of water in December 1927. (See* ALL HANDS, *May 1950, pp. 59-63 for excerpts of Tom Eadie's personal story of the rescue attempts of* S-4).

Commissioned in 1918, Falcon *operated off the East Coast of the United States during World War I and, at the end of hostilities, was sent overseas to help in lifting the North Sea Mine Barrage. (See "Taking Up The Mines,"* ALL HANDS, *May 1956,*

pp. 59-63). Designated AM 28 in 1920, Falcon *was converted to a submarine rescue ship and redesignated ASR 2 in 1936. She was stricken from the Naval Register 19 Jul 1946.*

At the time of the Squalus *rescue,* Falcon *was, perhaps, the best-equipped ship and her men the best qualified in the country to do her job. With an over-all length of 187 feet, extreme beam of 36 feet and standard displacement of 1060 tons, she was equipped for rescue and salvage work by powerful wrecking pumps, an extensive compressor plant, steam-driven winches, mooring and towing bitts, and the like. She could make 14 knots, had a complement of 74 men. Her commanding officer at the time was LT George A. Sharp,* USN.



DIG THIS—Drawing shows how tunneling lance was used to excavate mud to get chains around ship's stern.

ON PAGE 53 of this issue, reference is made to the study of the helium-oxygen formula for diving. Here's the way it worked on the *Squalus* job:

In her main deckhouse, readily accessible, *Falcon* had a recompression chamber with an internal diameter of six and one-half feet and a length of 14 and one-half feet. The chamber had an air lock at the outer end and was large enough to accommodate 20 men. The "iron doctor" had plenty to do in the case of *Squalus.*

Ordinarily two divers went down at a time; but only one man descended when an oxygen-helium mixture was substituted for air. The helium and oxygen were combined in definite proportions at the Portsmouth Navy Yard, and the mixture was delivered to *Falcon* in flasks at 1100 pounds pressure. This artificial atmosphere was supplied when divers were working at depths between 240 and 160 feet; but at lesser depths they were provided with straight air.

The average time of decompression for an ascending diver was only 20 minutes. When a diver had been brought up to about 50 feet below the surface, he was quickly lifted aboard *Falcon* and placed in the iron doctor where the pressure was immediately raised to correspond with that at a 50-foot submergence and the diver, with his cumbersome suit removed, breathed oxygen to speed up his decompression.

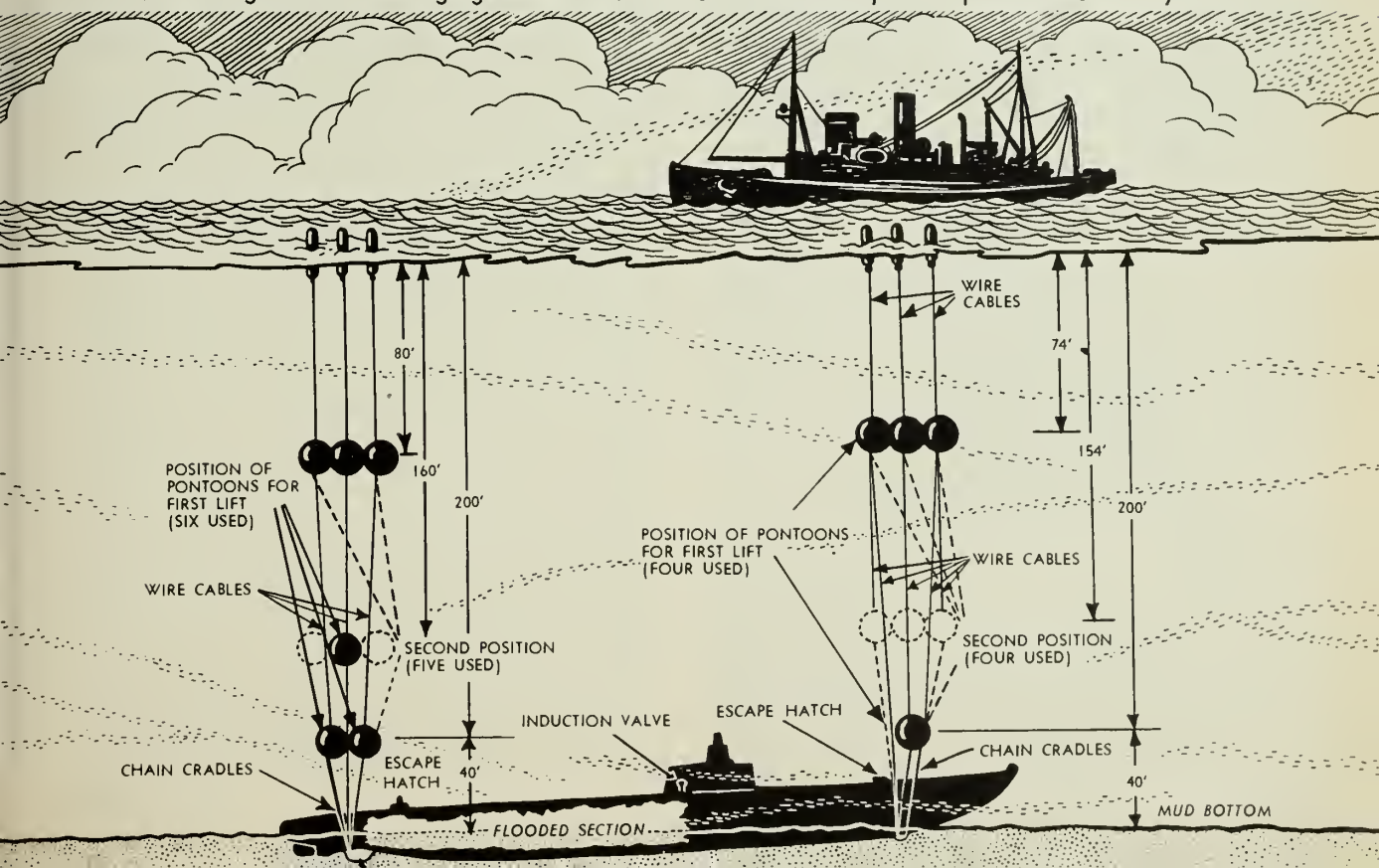
This shortened the time the men were held in the cold sea water and helped make life more comfortable for them. For instance, after a stay of 20 minutes on the bottom, 95 minutes would be required for decompression when air was used; but decompression with the oxygen-helium mixture took only 63 minutes.

THE OXYGEN-HELIUM MIXTURE, especially in cold weather, had a chilling effect on the diver; and those on *Squalus* were hampered at first by frosting of the water vapor inside the helmet. (In plain English, this meant that the water was so cold it froze the diver's breath on the glass of his helmet.)

The diver was clothed in an undersuit that enveloped every part of him but his face and was heated by current from a storage battery. At the height of salvage operations, *Falcon* had on board 49 of the Navy's best divers.

The first step toward salvage of *Squalus* was to place her forward compartments, from which the men had been rescued, under compressed air so as to prevent

ALLEZ OOP—Diagram shows salvage gear used to raise the submarine *Squalus* up from the muddy sea bottom.



FIRST NINE survivors to be rescued by diving bell from sunken *Squalus* are shown on board Coast Guard cutter.

water in the flooded after part from finding its way through the hull and the separating bulkhead into the fore part of the craft. Later, some of the forward ballast tanks were filled with water to help break the after body of *Squalus* free from the grip of the mud.

SQUALUS had an over-all length of 310 feet, beam of 27 feet, and a standard surface displacement of 1450 tons. Her submerged displacement exceeded 2000 tons. The difference between the two trims was the weight of water admitted to her ballast tanks so that she would be responsive to the diving rudders at her stern and the two diving planes at her bow.

Underwater, she was driven by electric motors which drew their energy from storage batteries. She could change from surface condition to complete submergence in about one minute.

In order to submerge, air must be allowed to escape from empty ballast tanks as sea water rushes into them. Furthermore, all hatches must be closed, as well as other air intakes, and many valves must be manipulated rapidly and in a closely ordered routine—every man at his station and doing his work at the right instant.

The air-venting valves are at the top of the ballast tanks; and while they are manipulated from within the main pressure hall, still they can be reached from the deck of the vessel and opened or closed for salvage purposes.

It is also possible from outside to make air connections with fuel-oil tanks to blow them. Both the oil and ballast tanks lie between the pressure-resisting hull and the nonpressure-resisting hull that gives the submarine her ship-shaped external form. Likewise from the deck can be made hose connections with the main compartments either to pump water out of them or to force it out with the aid of compressed air.

Twelve such connections were used to give *Squalus* buoyancy when raising her and when moving her shoreward. The remainder of the buoyancy was supplied by pontoons that both lifted the submarine and held her suspended at different depths while making the 15-mile journey to the drydock.

SUBMERGIBLE PONTOONS were first used by the Navy in 1915 to recover USS *F-4* from water 46 feet deep near the channel entrance to Honolulu Harbor, and later in raising S-51 and S-4. Some of the pontoons used for S-4 were also used in the far more difficult task of recovering *Squalus*. A total of 10 pontoons were used with *Squalus*—two with a buoyancy of 60 tons and eight were 80-ton units. The smaller ones weighed 30 tons apiece and the larger ones 42 tons each.

After the deck of *Squalus* was cleared of all hampering rigging and stray lines, the next step was to get under her the half lengths of the 90 feet of chain of each of six slings. This was not too difficult at the bow, where much of the keel was clear of the mud for about 100 feet; but the deeply embedded stern presented a pretty problem in tunneling.

Usually, such work is done by a diver guiding a high-pressure water line; but there is always the danger that the excavation will fill in and bury him. In the case of *Squalus*, a self-propelled nozzle, called a "lance," was used. This was fitted with sections of pipe from eight to 18 feet long, curved, and increasing in size from one inch to two and one-half inches. The ends of adjoining sections telescoped and were locked together at the joint with a toggle pin.

The diver guided the lance down from the deck of *Squalus* and kept the curved pipe close to and conforming to the hull. Water pressure up to 300 pounds per square inch was supplied by *Falcon's* fire pump; and the nozzle was designed to discharge rearward enough water to force the apparatus onward as the stream excavated the mud ahead. Small holes at intervals throughout its length allowed some of the water to escape and prevented the mud from filling in rearward and blocking the tube.

When the lance had made a circuit of the hull, a small wire cable was pulled through it and the tubing withdrawn. The receiving wire, progressively enlarged, served eventually to pull into place an entire sling which had been assembled aboard *Falcon*. Each sling was pulled into position beneath the sub by the winches aboard *Falcon* and the two ends of each sling were run through the two hawsepipes of a pontoon before it was sunk.

WHEN A PONTOON was alongside *Falcon* ready for sinking, an eight-inch manila hawser was attached at each end for lowering. At regular intervals, the hawsers were painted with colored bands which guided the men at the bitts and enabled them to pay out their lines in unison. To carry it down, the end compartments were flooded until the pontoon had a negative buoyancy between four and five tons. This made it easy to handle when sinking and made it sink rapidly.

When a pontoon reached its proper depth, it was moored to its two lifting slings by a cable clamp, known as a "flower pot," set on the top lift of each hawsepipe. The flower pot was a massive casting hollow from top to bottom, with its sloping interior fitted with roller bearings. Between the bearings and the steel cable were tapered wedges which dropped and jammed against the cable. When the pontoon tried to rise and pulled on the slings, the grip tightened.

At the start, the plan was to lift *Squalus* in three stages and to ground her twice on her journey back to the Navy Yard. As first arranged, the pontoons were set at three levels on the slings and when the topmost pontoons reached the surface, the sub was to be towed shoreward until she grounded.

On 13 July, the first lift was attempted. It didn't work. Here's the report:

"Lifted stern of *Squalus* with five pontoons about 85 feet clear of bottom. Then lifted bow with two pontoons, blowing ballast tanks forward. Both pontoons came to

the surface, followed by the bow. Forward sling carried away and bow sank. One sling aft and two lower pontoons on sling surfaced. Stern sank with remaining pontoons, possibly in a damaged condition. Think *Squalus* on even keel on bottom. Two chains still remain under the stern."

In other words, the bow of the sub came up so fast that the sub literally stood on end, then slid out of the arrangement of slings, and went to the bottom again.

IT TOOK A MONTH of hard work before she was again ready to be raised.

On 12 August, early in the morning, *Falcon* again began blowing air down into the ballast tanks of *Squalus,* as well as into the pontoons arranged in three levels above the sub—each given a positive buoyancy of 10 tons. The object was to give the pontoons their full buoyancy, applying the air first to the topmost pontoons and then downward.

Ten pontoons were used—six above the stern and four above the bow—with a total lifting capacity of some 760 tons. The theory was that the stern would rise higher than the bow and, as the boat was towed stern first toward shallower water, that the bow would be the first to ground.

In the midst of a wide area of water seething with escaping air bubbles, the topmost pontoons broke above the surface and, after bobbing about for a time, settled down. Tired men on board *Falcon* grinned and shook hands. The toughest part of their job was done.

USS *Wandank* (AT 26), with a line down to the stern of *Squalus* and to the surface pontoons above the stern, led the procession toward shallower water near the Isle of Shoals, while *Falcon,* with a line to the bow of the submarine and hawsers to the trailing pontoons, took up her station at the rear. Over the bow of *Falcon* leading to the pontoons and to the suspended *Squalus* there were as many as 37 lengths of one-and-one-quarter-inch pneumatic hoses distributing compressed air. All went well until the stern of *Squalus* struck an uncharted ridge of mud and the whole procession came to an abrupt halt.

Five days later, after readjustments and with four pontoons at the bow and five at the stern, *Squalus* was raised again—without a hitch—and towed another five miles where she was again grounded—purposely, this time—some two miles west of the Isle of Shoals.

Here, in 90 feet of water, she was prepared for her final lift and for the long tow to the Navy Yard. The pontoons were rearranged again; this time, two were placed at the bow and two at the stern on opposite sides, and were held close to the deck and lengthwise with the submarine.

This meant a lot of work for the divers and for *Falcon.* Shallow water added to the difficulties. Stormy weather twice drove the salvage flotilla to port. Finally, on 13 September, *Squalus* was brought to the surface a fifth time and held there by her pontoons with only a small part of her body visible above water. In that condition, after twice touching bottom on the last long lap of her journey, the submarine was moored at the Portsmouth Navy Yard—just 113 days after she had left the station for her submerged sea run.

During much of the salvage work, Squalus' sister sub, *Sculpin,* stood by to aid the divers to familiarize themselves with the external details of the sunken craft.

In spite of the hazards faced by the divers and the men on board *Falcon,* no one was injured. During two of the lifting operations some 20,000 feet of air hose were used; and the deck of *Falcon* was often buried deep with thousands of feet of cables, hawsers and miscellaneous gear.

As might be expected, Squalus *was in somewhat disheveled condition upon her arrival at Portsmouth. Nevertheless, it was obvious in 1939 that every ship and every type of craft was soon going to be needed. Thus,* Squalus *was decommissioned and after six months of extensive overhaul she was recommissioned in May 1940 as* USS Sailfish *(SS 192) with then LCDR M. C. Mumma, Jr.,* USN., *as commanding officer.*

At the outbreak of the war, Sailfish *was at Manila and, on the following day, she steamed out along the west coast of Luzon to begin the first of her 12 war patrols. Five days later she was able to lay claim (officially unconfirmed, however), to the distinction of sinking one of the first enemy destroyers to be accounted for by a U. S. Navy sub in World War II.*

Her official record consisted of seven vessels—four cargo ships, one passenger-cargo ship, an aircraft ferry and a 20,000-ton escort aircraft carrier.

It was on her 10th war patrol that she sank the carrier Chuyo *and, in doing so, earned her Presidential Unit Citation "for outstanding performance in combat against strongly escorted enemy task forces and convoys in Japanese-controlled waters."*

She was decommissioned 27 Oct 1945 at Portsmouth, her "home" yard which she had not seen for years. This ship with two lives was finally stricken from the U. S. Naval Vessel Registry in April 1948.

SHIPSHAPE—Crew members of *USS Sailfish* (SS 192), the former *Squalus,* fly PUC flag won for carrier sinking.

TAFFRAIL TALK

THIS ISSUE on the Underseas Navy barely goes skin deep. It's a vast subject and there are many aspects of it that we have merely touched upon. For example, Navy's pioneering work in the field of submarine development, and the proud achievement of the world's first nuclear ship. But we have discussed these subjects before on different anniversaries of the Submarine Navy (ALL HANDS April 1955, April 1956, April 1958), and so the space in this issue went to other subjects.

We have tried to look at the subject from the individual's point of view—that is, what this strange world looks like and how it affects the salvage diver, the frogman, the ordnance disposaleer, the diving corpsman, the submariner and the scientist. There was a lot more that we wish we could have included, but you'll be hearing about those subjects in future issues. Meanwhile, if you can add to this subject, let's hear from *you*.

★ ★ ★

Just as we were going to press we received an interesting letter from Will Jacobs of Hartford, Conn., who had some queries about the Underseas Navy.

"I have been asked the same question many times," he says, "but I cannot find the answer. Maybe you can help.

"As you know, all qualified Navy deep sea divers wear an emblem on their uniform showing that they are a Master, First and Second Class Diver. Why don't Scuba divers or UDT personnel have a distinguishing patch? I feel that a qualified Scuba man is as important as a deep sea diver and should be shown some recognition. How do you feel about this?"

Those were good questions, but we didn't have the answers ourselves, so we went to the sources—the Training people and the Naval Uniform Board. Here's their answer:

"All qualified deep sea divers are trained to use all types of diving equipment including the self-contained breathing apparatus used by the free swimmer or Scuba diver. But Scuba divers are not qualified or trained in the use of surface supplied or deep sea diving gear.

"All graduates of the Navy's Underwater Swimmers School at Key West, Fla., are designated Scuba divers. However, upon completion of the school, the majority of them go on to EOD (Explosive Ordnance Disposal) or UDT (Underwater Demolition Team) training. When they complete this more advanced and highly specialized training, they drop their basic Scuba designator in favor of the higher qualifications and designations.

"Although the Navy uses Scuba divers quite extensively, there's only a limited number of billets for Scuba divers. When Scuba diving is required and authorized, it is generally done by qualified deep sea divers, EOD technicians and UDT men.

"EOD technicians, who are qualified Scuba as well as Divers Second Class, are authorized to wear an EOD distinguishing mark on their right sleeves. However, this mark does not indicate that the individual is a qualified diver. It consists of a mine superimposed on a crossed torpedo that points down to the right, and a bomb that points down to the left.

"As yet, UDT personnel, who are also qualified Scuba divers, do not have an authorized distinguishing mark."

That's the answer—for the present.

The All Hands Staff

The United States Navy

Guardian of Our Country

The United States Navy is responsible for maintaining control of the sea and is a ready force on watch at home and overseas, capable of swift action to preserve the peace or of instant offensive action to win in war.

It is upon the maintenance of this control that our country's glorious future depends. The United States Navy exists to make it so.

We Serve with Honor

Tradition, valor and victory are the Navy's heritage from the past. To these may be added dedication, discipline and vigilance as the watchwords of the present and future. At home or on distant stations, we serve with pride, confident in the respect of our country, our shipmates, and our families. Our responsibilities sober us; our adversities strengthen us.

Service to God and Country is our special privilege. We serve with honor.

The Future of the Navy

The Navy will always employ new weapons, new techniques and greater power to protect and defend the United States on the sea, under the sea, and in the air.

Now and in the future, control of the sea gives the United States her greatest advantage for the maintenance of peace and for victory in war. Mobility, surprise, dispersal and offensive power are the keynotes of the new Navy. The roots of the Navy lie in a strong belief in the future, in continued dedication to our tasks, and in reflection on our heritage from the past. Never have our opportunities and our responsibilities been greater.

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The Bureau should be kept informed of changes in the number of copies required.

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• AT RIGHT: LOOKING AFT along her fish-shaped body, *USS Albacore* (AGS 569) cuts a narrow wake as undersea sailors cruise topside off Florida Keys.

★TRAINING
★SAFETY
★ADVENTURE
IN YOUR NAVY

ALL HANDS

APRIL 1959

Seapower, Mobility and Freedom-

It is becoming more generally recognized throughout the world that American seapower in the twentieth century is a powerful influence for peace and stability. Our ships and Navymen stand watch at sea in support of the cause of freedom under moral law and justice. Our operating fleets are evidence of our active partnership in the free world effort to create a stable world community in which men may live in freedom and in peace.

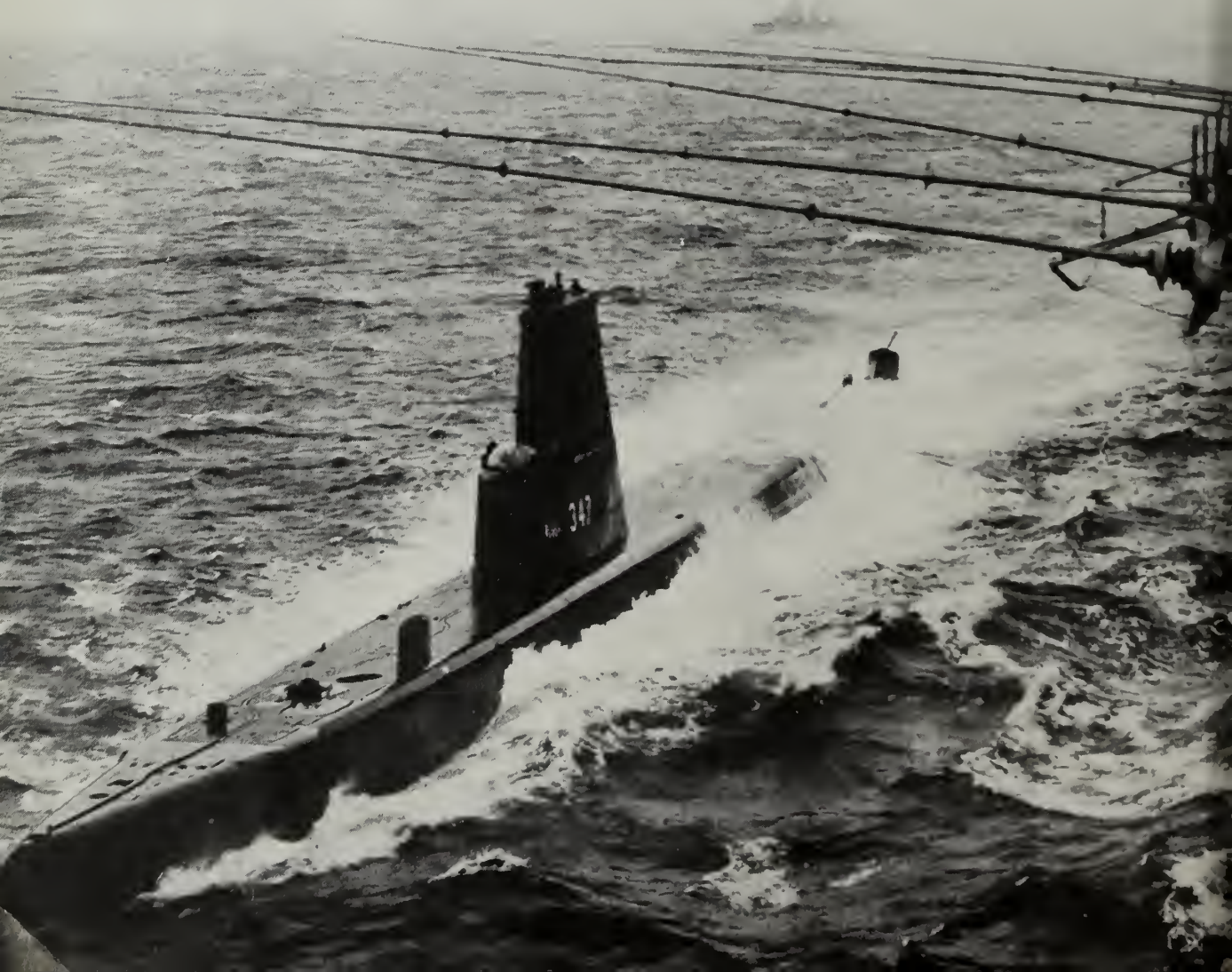
Standing astride man's path to progress in civilization is the concept of Communism -- a concept of slavery and oppression. United States naval forces are deployed and constantly on the move throughout the world ready to extend the friendly hand of American support to any free nation whose independence is threatened by Communist force or violence.

The combined capabilities of American carrier striking forces, submarines, anti-submarine units, logistic support forces, and amphibious forces with Fleet Marines provide strength necessary to meet military aggression wherever it occurs.

Naval forces are more important in the missile age than ever before. Mobility is a primary capability of navies. Support of our free world allies depends upon the ability of the Navy to move, unhampered, to wherever it is needed to support American foreign policy. This is the great contribution of United States seapower toward the progress of free civilization.

Arleigh Burke

ARLEIGH BURKE



ALL HANDS

THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN

APRIL 1959 Nav-Pers-O NUMBER 507

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• **FRONT COVER: HAPPY DAY**—Smiles were plentiful when Bill Swafford, BM3, USN, was greeted by his family as his ship, USS Seminole (AKA 104), moored at San Diego following tour in Western Pacific.

• **AT LEFT: TEAMED FOR FREEDOM**—Submarine rendezvousing with carrier on the high seas keynotes statement by Admiral Arleigh Burke on seapower, mobility and freedom.

• **CREDITS:** All photographs published in ALL HANDS are official Department of Defense Photos unless otherwise designated.

MEN, SHIPS, PLANES and Missiles of the United States Navy form mobile bases of operation ready to strike back

CNO SPEAKS ON THE

ALL HANDS *rarely prints a speech. However, every once in a while the staff will read one and come to the conclusion that it tells a story that couldn't be told in any other way. Here is such a speech.*

Admiral Arleigh A. Burke, the Chief Of Naval Operations, made it, speaking before the Chamber of Commerce and assembled guests in the important seaport city of Charleston, South Carolina. The Admiral answers a lot of questions—and, we believe, gives you a lot of material to think about. It is plain talk; it doesn't pull any punches—it's all there for you to see.

I AM PARTICULARLY pleased to have this opportunity to talk to leaders of a community which has always been important to the United States Navy, and which is now becoming even more so.

Charleston is becoming more important as the Navy goes forward with its fleet dispersal program. This is a program which has been instituted in recognition of constantly changing needs in national security.

World conditions are very fluid. The situation is constantly changing. We have seen rapid advances in technology. We are witnessing rapid, and sometimes unpredictable, progress in weapon system development.

For this reason, we must constantly reexamine the nature and degree of the threat facing us, and we must keep under constant review our needs to meet it. This means that we must continually reevaluate our military posture. In reexamining the threat confronting us, we must recognize at the very outset that the Soviets have no intention of gaining their objectives solely by the use of military force.

ADM Burke

This is one of the most misunderstood facts of life today. The Communists have demonstrated over and over again, both in word and deed, that military force is only one of many means which they expect to use in their efforts to take over the world.

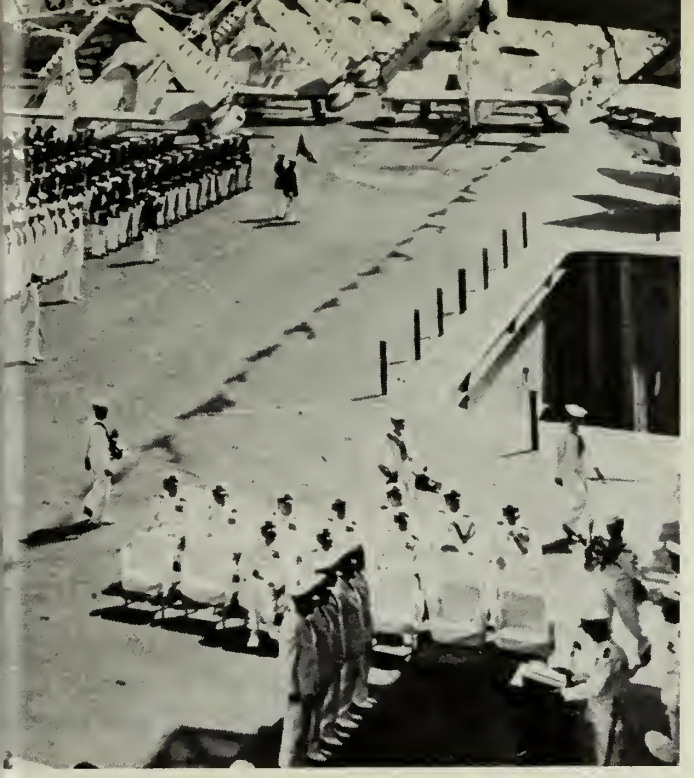
Indeed the danger could come more from an economic Communist offensive leveled against the free world.

It is important for us to understand that a cardinal rule of the Soviet leaders is that the destiny of Communism must not be jeopardized by harebrained risk.

It is not saber-rattling to say that the Soviets know that the United States has the ability, right now, in being, to destroy the Soviet Union. We can do it in several ways, and several times over with our powerful Strategic Air Command of the United States Air Force, with carrier striking forces of the United States Navy, with tactical air, and with Intermediate Range Ballistic Missiles which are now being installed in certain European sites.

The Soviet Union can not prevent our retaliatory strikes should the Kremlin leaders decide to initiate general nuclear war. Therefore, the probability of general nuclear war is remote, for it would be suicide for the USSR.

The advent of ballistic missiles for delivery of mass destruction warheads has raised some basic considerations in the



at any enemy that might attack.

COLD WAR

role of armed force as an instrument of national policy.

Missiles have placed new emphasis upon the importance of concealment and surprise. This makes our own installations and cities more vulnerable than ever before.

In the remote possibility that the Soviets might undertake to initiate a general nuclear war, their prime objective would be to eliminate the ability of the United States to retaliate.

To do this, the Soviet Union would launch its missiles against our known positions. Everybody knows where our bases and installations are located. Everybody knows the locations of our strategic air bases here at home and abroad. Our missile sites also will be known no matter how many we build, or how much we attempt to keep them secret.

This poses a major problem for the United States. In the past 100 years of history of our wonderful country, we have considered that anything in the continental limits of the United States was relatively safe.

With the distances involved, and the limitations then inherent in the weapons of war, when the United States became a first class seapower we recognized that it was a good thing to base our military strength primarily in our own homeland until it was needed in war.

In an age of ballistic missiles, it is now just the opposite. The security of bases in the continental limits of the United States will no longer be fully available to us when ballistic missiles become fully operational.

WE FACE THE FURTHER PROBLEM, on the other hand, that we will not have knowledge of the location of each and every enemy missile site. Even if we could expect to have this knowledge, we recognize that in general nuclear war missile forces can no longer attempt to destroy their enemy counterpart without destroying the corporate body of the enemy state itself, provided all these forces are stationed within the heart of the homeland.

This works both ways. All the world knows that the United States will not initiate war, or take steps designed to provoke war. In such circumstances what do we do in the face of a growing Soviet missile capability?

There has been considerable concern in this country about a missile gap. Most of this concern has been centered primarily upon a numerical difference between United States missile strength and that of the Soviet Union.

However, it is not a quantitative gap we should be concerned about. Rather it is a qualitative gap we must be careful to avoid.

In this connection the United States is ahead of the Russians in retaliatory power; it is far more powerful than the Soviet Union, and this is a status which we can and will maintain.

As we move into the age of ballistic missiles, however, we must have missile sites whose locations are not known to the Soviets. This would reduce any advantage of enemy surprise or initiative. This would present to the enemy a United States ballistic missile posture which assures the enemy that he will be destroyed if he launches a nuclear attack against us or any of our allies.

THE REAL QUESTION, then, is, can we avoid the qualitative gap which could develop in the years immediately ahead? The answer is yes.

It has been in response to these problems that we designed the Navy's Fleet Ballistic Missile system *Polaris*,

FLEET BALLISTIC submarines provide elusive power.

NAVY PLANES can reach far from their floating fields.

to be carried in submarines. A seagoing system answers these problems. It provides the best answer now in sight. It is a system which will be hidden and moving in the depths of the sea.

The enemy will be unable to pinpoint these Fleet Ballistic Missile forces in advance for a surprise attack because their locations at sea will not be known, and the nuclear submarines carrying *Polaris* will be constantly on the move. Any attempt to neutralize these forces will draw the enemy attacks to sea, away from population centers on land.

We will not need many of these Fleet Ballistic Missile systems. We will need enough to do the job. But the United States should not place its reliance for deterrence solely on *Polaris*, or any other single system. We should retain diversified capabilities.

We must, of course, keep in mind what has to be done. We must make sure that Russia knows we have enough to destroy the Soviet Union, and that we will use it if she launches a nuclear attack.

There is no point trying to equate our requirements and capabilities with the enemy's. Our requirements

U. S. IS AHEAD with sea-launched guided missiles.

are entirely different and our capabilities must be developed around our own needs. We do not need to engage in an endless arms race with the Soviets in ballistic missiles, any more than we have attempted to race them in numbers of submarines or army divisions.

The really important thing about a deterrent force is not numbers but invulnerability; not total numbers built, but numbers we will be able to use. In making our retaliatory forces secure from enemy attack, we do not need great numbers of missiles and bombers.

Whether the USSR has one-half as many or several times as many missiles as the United States is really academic as long as we have the assured capability of destroying Russia, and as long as the Soviets know it, and are really convinced of it.

THERE is, in fact, far greater psychological advantage for the United States in having this capability than in allowing ourselves to be drawn into a fruitless and unnecessary race on Soviet terms.

Hiding behind the iron curtain the Kremlin can tell us what they want us to know, and they are able to conceal fairly effectively that which they don't want us to know.

If they had a particular capability, would they make such statements as to cause us to build an appropriate response to that particular threat?

If the Kremlin really intends to exploit an advantage, would it not be better for them to remain quiet and surprise us with deeds rather than words?

The United States is embarked upon a defense program aimed at meeting our security needs. By not entering a numbers race with the Soviets on their terms we also avoid the limitless economic drain which such a race would involve.

We can afford what we have to afford for United States security, but also, we must spend our funds for what we need. We must apportion our funds carefully to meet all the contingencies facing us.

A general nuclear war deterrent will deter mainly that, little else. Our powerful retaliatory capability has

UNDERWATER launched *Polaris* adds to missile power.

not always deterred lesser assaults in the past, and it will not in the future.

We know that the Soviet expansionist policy is continuing. There have been local aggressions, local uprisings, local crises in the past, which could not be dealt with by the use of mass destruction capabilities.

These will continue to face us in the future, and we will be able to deal with them effectively only by measures which fit the local circumstances.

This means controlled, precision forces which can be operated with discrimination and finesse, forces armed with conventional weapons and small atomic weapons, forces which can apply the right degree of power with pinpoint accuracy.

Our military requirements cover a very wide spectrum of possible situations. But even this is not enough. Military measures, by themselves, are not enough.

LET US LOOK for a moment at what the Communists themselves have been telling us.

We can debate at length among ourselves on what proper military measures to take in our own defense. We can discuss budgets, military posture, and the various forms of modern warfare. We can examine our weapons systems, and our progress in research and development.

But we can lose the entire stamina and integrity of our civilization if we do not recognize the challenge presented to us by a nation sworn to take us over.

Distinguished American visitors to the Soviet Union in recent weeks have told me that the most dangerous thing they saw in Russia is the look on the faces of the people.

What Americans have seen in their visits to Russia is the grim look of determination, the cool and deliberate confidence of people who are going places, who know they are missing a lot of life, who know they are being forced to sacrifice both tangible and intangible human values, but who are resolute in their aim to beat the United States in everything.

LATEST shape in A-subs, *USS Skipjack*, SS(N) 585, at sea.

RESUPPLY at sea keeps ships out of known target areas.

And what do they expect to gain by this? Simply this—they expect to gain prestige in the eyes of the rest of the world. They expect to gain greater respectability in the world. They expect to demonstrate that their way is the way of the future. How better can they prove all this than by beating the United States in everything, in athletics, in the arts, in scientific achievement, in industry, political maneuver, and everything else.

THIS IS THE CHALLENGE which faces the United States. The Soviets have not said they were going to take the world through general nuclear war. What they have said is that Communism is the wave of the future, and will take over the world.

Fifteen years ago we thought the Soviet Union would build a massive force of long-range aircraft. They certainly had the capability of doing it. But they did not build many.

Two years ago we were given a jolt with their unveiling of a new and powerful long range jet bomber, the *Bison*. But the Soviets did not build many of these either.

CARRIER-BASED air power strikes from many directions.

SYMMETRY AT SEA—DER radar picket escorts of Pearl Harbor-based squadron maneuver off Hawaiian coast.

Today their space achievements are impressive. Their objective is two-fold. First, they want to be really able to develop the military capability which is implied by such achievements. They need not necessarily do it, but they want to be able to if they think they have to.

Their second objective is to demonstrate to the world the technological proficiency of the USSR; they want to show the world that they can do it.

Both of these have their roots in Soviet psychological pressure on us, on our allies, and on the rest of the world, both within and outside the Sino-Soviet bloc.

We fall into their mouse trap when we ourselves become so obsessed or preoccupied with these worthy accomplishments as to ignore all the other things they are doing to undermine freedom, to upset the stability of independent nations, and to insinuate their philosophy into the thinking of free men everywhere.

Let us not underestimate the capabilities of the Soviets. Their scientific achievements along certain lines have been superior. But let this not blind us to all the other much less spectacular things they are doing, the many little, devious, conspiratorial inroads they are making everywhere.

We have many problems before us in facing up to this Communist challenge. We must not become enchanted with the prospects of military power in the space age at the expense of the many other demands upon us. The competition covers a far wider range of effort than military effort alone. The range now extends to include everybody, not just the military.

OUR COUNTRY HAS GROWN strong in an environment of personal liberty in which the spirit of competition runs strong among us. The United States has become a world leader as a result of the effort of many hard-working people to whom the concepts of private enterprise and individual initiative have real meaning.

But today we run the grave risk of becoming complacent in our position of world leadership, and of becoming indifferent to the hard realities of the competition we face as a nation.

The USSR long ago declared cold war on us, and they have been working hard at it ever since. We cannot stay aloof from this challenge. We are in a competition now for our national existence. We are engaged in a war of attrition in which the Communists intend to make each victory irreversible, no matter how minor it may seem to us. Taken together over the long haul, these victories could be decisive.

We are ahead of the Soviet Union now. We are industrially ahead. We are ahead of the Soviets in the application of nuclear power in our naval forces. We are ahead in the development of solid propellants for ballistic missiles, a capability, incidentally, which was first developed by the Navy over thirty years ago at the Naval Engineering Experiment Station, based on early work by Dr. Robert H. Goddard.

We are ahead in the development of a Fleet Ballistic Missile system, the Navy's *Polaris* missile.

The United States is ahead in its ability to use and exploit the sea, in antisubmarine warfare doctrine and capabilities, in the application of naval air power from carriers at sea, in guided missiles at sea.

These capabilities did not come overnight. They are the result of solid thinking and hard work, hours, days, and years of attention to the many jobs the Navy has to do. They are the result of cool determination, and the intelligent application of always-limited resources.

THIS IS THE CHALLENGE which faces the entire nation today. It is the challenge of facing Communist competition in every line of human endeavor. It is a challenge which will not be met with slogans, gimmicks, and simple answers.

It is a challenge which summons all Americans once again to reaffirm our purpose in the world community of nations, and to pursue that purpose with vigor, and not be deflected by the cold winds of Communism.

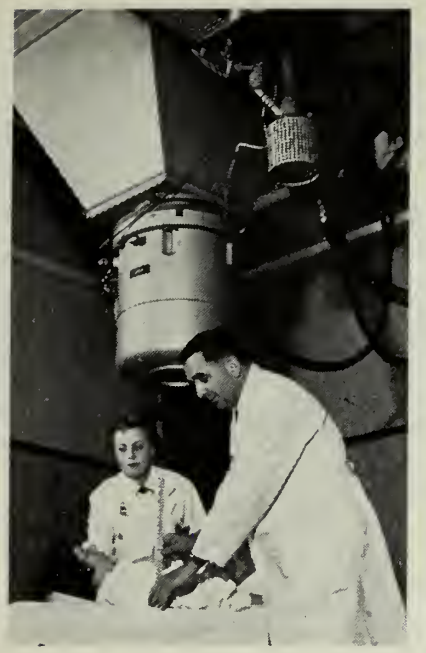
Let us take a hard look at what is happening in the world, a hard look at what is happening to our markets in the world, and let us look at the Soviet economic offensive and determine how well we are responding to it.

Let us take a hard look at what we need in military hardware.

The answers will not be found in mathematical equations or with master-stroke answers. We are talking about the whole spectrum of human endeavor, for which there is no single, or simple formula.

The United States is ahead today, but we will stay ahead only by the dint of hard work, by higher standards of individual achievement, by the exercise of free initiative, and by placing our personal comforts and interests second to the interests of a strong, virile, and dynamic United States.

This is not a one-man job. It is not a one-hundred-man job, nor a job only for a million men. It is a challenge to one hundred and seventy million Americans. It is a job for you and for me, for all of us, for your children, and your children's children, for as long as they live, they will live in competition.

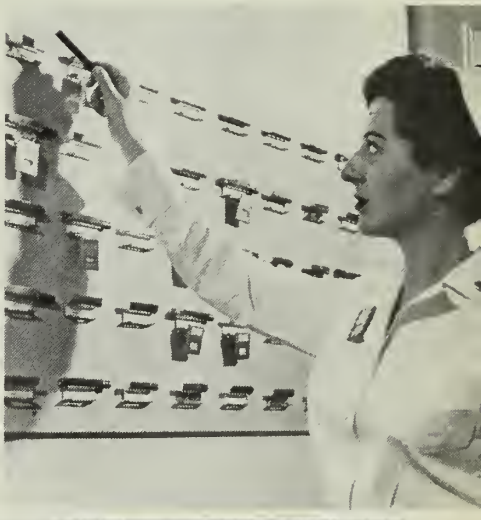


Nuclear Nurses

NOW THAT THE ATOM has taken its place in the Navy as a power source for ships and weapons, the Navy has been developing protective equipment and medical countermeasures to cope with the possible dangers of radiation. At the same time, naval hospitals and clinical laboratories are finding many beneficial uses for radioactive material.

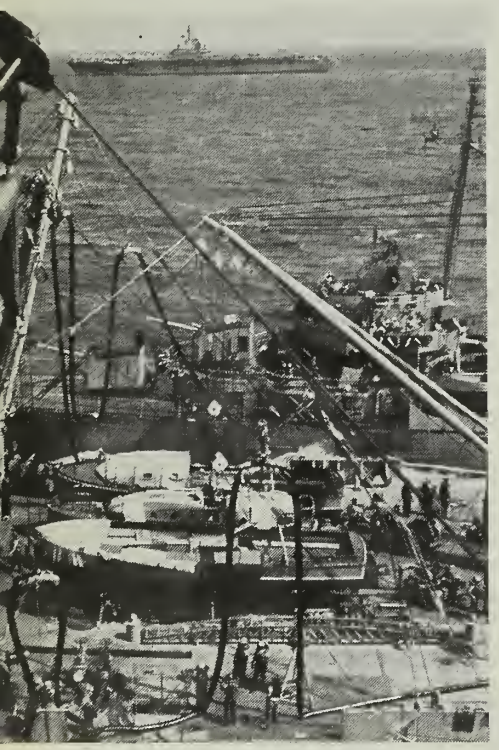
Among the newest facilities working in these highly important areas is the Nuclear Nursing Division of the National Naval Medical Center located at Bethesda, Md. The nursing facility, a pioneer in this field, not only trains naval personnel in atomic medicine but is also open to qualified nurses from other services.

Clockwise from top: (1) Navy doctor demonstrates preparation of patient for therapy. (2) Nurses get the word on radiation survey instruments. (3) Nurse hangs up her pocket dosimeter and film badge used to check amount of radiation exposure after session in lab. (4) Navy nuclear nurses learn techniques for monitoring patients who have received radioisotope therapy. (5) HM explains use of TV monitor of teletherapy unit.



HIGH AND LOW views show complexity of refueling. *Top: USS Mississinewa* (AO 144) and (below) *USS Ponchatoula.*

Fleet Oilers Keep Navy



FUELING AT SEA is one of the least publicized activities of the seagoing Navy, yet one of the most colorful—as well as being essential to the mobility and flexibility of the Fleet.

The ships of the Navy's Service Forces are often referred to as the Fleet's secret weapon; they provide the underway delivery of beans, bullets and black oil to give the Fleet its mobility and flexibility. These auxiliaries make it possible for our warships to remain at sea indefinitely and to come and go as they please in the traditional "freedom of the seas" manner.

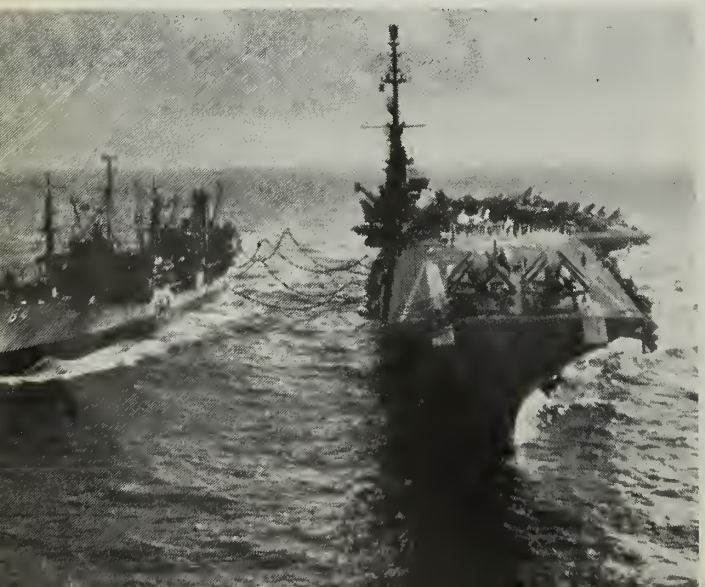
Among the many ships of our Service Forces are the Fleet Oilers, referred to as "floating gas stations." They provide other Fleet units with petroleum products such as aviation gas, diesel oil, Navy Standard Fuel Oil (NSFO), bunker oil, lubricating oil, thousands of bottles of carbon dioxide, acetylene, helium and other gasses, as well as tons of general stores. All are delivered by Fleet Oilers during normal fueling-at-sea operations.

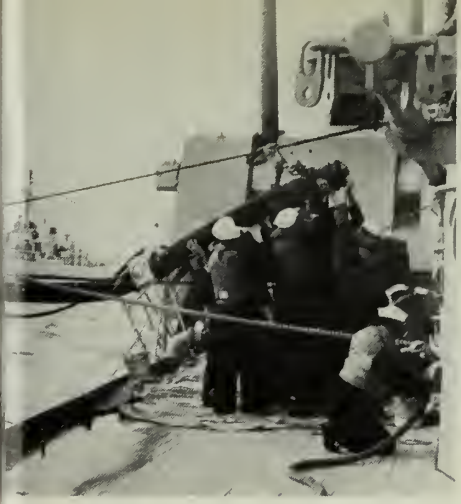
Ships of the Fleet have put some new life into the hard tedious work associated with fueling functions. Bands strike up a tune and play throughout the operation. Some carriers have provided "hillbilly" vocalists and other entertaining groups to put on their acts during replenishment whether at night or during the day, while others have baked cakes for the occasion.

In spite of this "new life" there's still much hard work to be done during fueling operation which falls upon the crews of the oilers.

Typical of the Navy's many Fleet Oilers is USS *Mississinewa* (AO 144) which is currently operating in the Med with the Sixth Fleet. She is one of the newest super-tankers in operation and is setting a peacetime record that will be hard to beat.

FLOATING SERVICE STATIONS—*USS Tolovana* (AO 64) re*fuels USS Midway. Rt: USS Allagash* (AO 97) services two.





TRANSFER—Cruisermen set for fuel.

On the Go

Since *Mississinewa* commenced her present tour with the Sixth Fleet, she has fueled 620 ships (from April 1958 to Jan 1959). Before returning to her home port, she expects to triple this figure. During one 24-hour period in May 1958, *Mississinewa* received 31 ships alongside for the transfer of fuel. She also transferred 105 men to various ships.

Besides carrying fuel products to the Fleet, modern oilers also carry mail, provisions and personnel in need of transportation.

Fleet Oilers refuel every type of ship from the smallest minesweeper to the largest carrier.

Regardless of weather conditions, you'll find the Navy's Fleet Oilers on station. From early reveille (some times as early as 0200) to late at night, they are on the job—refueling and replenishing other Fleet units so they can go on and continue their part in maintaining world peace.

—J. Russell White, JOSN, USN.

TEAMWORK—Refueling at sea while underway is a precise operation. *Below: USS Chukawan* (AO 100) makes way through Med. on Fleet fueling mission.

BIG JOB—*USS Ponchatoula* (AO 148) fuels *USS Ranger*. *Rt: USS Severn* (AO 61) fuels *USS Des Moines* and *Forrestal*.

HOT SHOT—Full eclipse of the sun was target of scientists at base established on the remote island of Puka Puka.

Mission to Puka Puka

IT WAS AN UNUSUAL CRUISE from the very beginning. After taking two helicopters aboard at San Diego, USS *Point Defiance* (LSD 31) had proceeded to Seal Beach, Calif. Here, she took aboard two Mike boats (LCMs), a DUKW, two LVTs, a clutch of *Nike-Asp* rockets, and 107 tons of explosives. Pearl Harbor was next, where she took aboard a group of Navy astronomers and such supplies as a field kitchen and a walk-in reefer.

A strange miscellany of equipment for an Amphibious Force LSD? Right you are. However, her mission was equally off-beat. She was preparing for a very elaborate study of a solar eclipse.

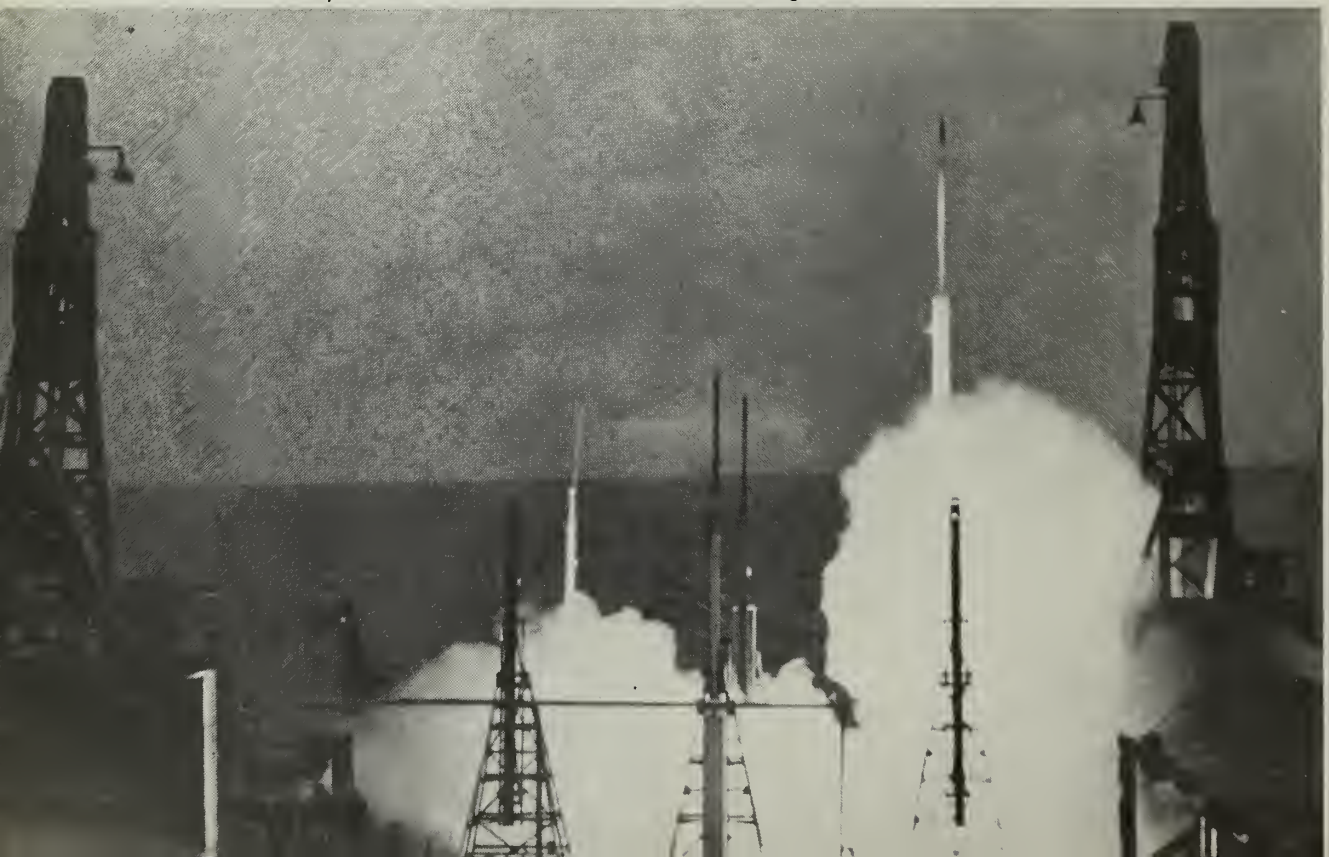
Finally squared away, *Point Defiance* set course for the island of Manihiki, in the Northern Cook Group. For the majority of the crew and the civilians aboard—pollywogs all — the next encounter was intensely personal. They ran right smack dab into the equator and the old Navy tradition which demands that men who cross for the first time must face initiation.

Most Navymen have a good idea what this means; but for the Navy scientists, this was one field of research in which they had failed to inform themselves. They had little idea what they, as pollywogs, had coming. There were many theories. A Sacramento, Calif., scientist for example, was confident it would be a grisly event which only the lucky ones would survive. Others thought it was all just a gag.

While the pollywogs reviewed their theories, Captain Edwin F. Woodhead, USN, commanding officer of the ship and over-all commander of the expedition, plotted their fate.

On the day of the crossing, crew members and civilians, under the direction of Captain Woodhead, leading shellback aboard, got the

FACT FINDING—*Nike-Asp* research rockets blast off deck to bring back information on various solar radiations.



full treatment. They received medicine from the Royal Doctor, a dunking in the Royal Bath, and a special haircut before being presented to the Royal Court over which King Neptune and the Royal Queen presided. Contrary to some of the pre-initiation speculation, not a single pollywog was mortally wounded other than in his pride.

WITH THE SHIP now completely manned by shellbacks, *Point Defiance* arrived off Manihiki. A helicopter flew to the island and brought aboard the Resident Commissioner of the New Zealand government, Mr. O'Brien. (New Zealand owns this small island group which includes both Manihiki and the nearby island of Puka Puka. Puka Puka may be translated as Nothing-Nothing. The island is inhabited by Polynesians and is rarely visited.)

Navy scientists planned to set up an observation post on Puka Puka. Mr. O'Brien had agreed to arrange with the islanders for the Americans to do their work.

The following morning, as the ship lay off Puka Puka, a helicopter made preliminary reconnaissance flights to survey the reef. It appeared to be about 350 yards wide with a depth of water over it varying from six inches to as much as three or four feet with the tide in. The lagoon was 18 to 20 fathoms in its deepest parts and filled with coral heads that made small islands. About 500 yards from shore was a straight drop to a depth of 70 fathoms. At 600 yards, no bottom was detected.

Mr. O'Brien landed on Puka Puka from one of the helicopters and, after the natives were enticed out of hiding, explained that the Americans were there for friendly purposes. With the native's consent, a camp site was selected and the off-loading of supplies began.

To cross the reef, the mikeboats towed out the heavy barge with a caterpillar tractor aboard. The barge was shoved on the reef and anchored. From then on, the barge was used as a stepping stone to the beach. Supplies were taken from the ship to the barge in mikeboats. From the barge they were loaded into the DUKWs and LVTs which took them ashore. For four days, tents, lumber, refrigerators, generators, and a field kitchen were brought ashore.

FOR THE FIRST TWO DAYS, the shore party ate cold sandwiches. On the third day, when the field kitchen had been erected, the first hot meal was served.

Temporary living quarters, which included a six-man hut, a 32-man tent and another tent for the UDT men, were started on the first day. It rained hard for the first three days on the island, and until the tents could be erected, coconut trees furnished the only shelter. The men kept working, however, and by the end of the fourth day, 125 boxes of instruments had been taken ashore and 12 shelters had been erected.

With the scientific party ashore, and supplies successfully landed, *Point Defiance* sailed for Samoa to pick up additional medical supplies and photographic equipment.

Meanwhile, on the island, work started early in the morning and continued until 10 o'clock at night. About 25 per cent of the actual manpower was furnished by the natives. Between 50 and 100 islanders participated.

At the beginning, the local residents offered to lend a hand in return for a ride in a DUKW. Later, they asked to be paid in cigarettes.

Laundry service was free. In fact, the ladies fought for the privilege. An agreement finally was reached whereby eight women per week from the island's three villages, selected by the wife of the Chief of Police, drew the desired duty.

THE ISLANDERS' FRIENDSHIP was expressed when the Council of the island voted that 700 coconuts from each village be given as a gift to the ship.

While the astronomers continued their work, UDT men blasted a hole through the coral reef. At first the natives were startled by the explosions, but soon they were plunging out to the reef immediately after a blast to reap the harvest of fish killed by the impact.

Movies were immensely popular with the natives. Two or three hundred appeared the first night to see a Western, and there was a regular attendance of 50 to 100 curious watchers each following night.

STRANGE CARGO—*USS Point Defiance* (LSD 31) carried an unusual load.

To reciprocate, Puka Puka prepared a great feast for the outlanders. The menu included coconuts, taro, coconut crabs, fish and chicken set out on banana leaves. The food was placed on three long tables arranged in a "U" formation, with about 30 diners at each table. Speeches of greeting and welcome were presented by the tribe's talking chief and translated by Mr. O'Brien. After the meal, the guests were presented with gifts of mats and baskets.

POINT DEFIANCE, who was meanwhile engaged in her secondary job of recharting the island, left for another trip to Samoa to pick up more NRL scientists.

Two test rockets had been erected

DOUBLE DUTY—In addition to functioning as rocket base for eclipse studies, *USS Point Defiance* made the first new charts of the small island since 1925.

on the helicopter deck before the ship left Samoa. The first test shot was scheduled to take place about 40 miles from Puka Puka two days after her return. When the attempt was made to fire the first rocket, the instrumentation transmitter failed and the shot was cancelled. A heavy rain squall hit almost immediately and continued all day. The thin plastic bags which were to protect the rockets from water and moisture, promptly tore to shreds in the wind.

To protect the rockets, one scientist donated his raincoat to shield the instrumentation section and Captain Woodhead contributed his plastic shower curtain which a sailmaker aboard sewed into protective covers.

The second attempt the following day was successful and, three days later, the second test shot was also fired successfully. These were the first *Nike-Asp* rockets to be fired from a ship.

On the day of the eclipse, rain squalls started at 0725. Nevertheless, on Puka Puka, instruments were pointed skyward, and aboard *Point Defiance* the six 1200-pound rockets were poised on the helicopter deck.

Then, as if a hand had gently pulled a black cloth over the sun, the eclipse began. A cord on *Point Defiance* was pulled and two of the instrumented rockets roared into the ionosphere.

Moments later, two others followed.

THEN THE PULLAWAY cord on the fifth rocket came loose. A technician from the Naval Research Laboratory, Donald Brousseau, dashed from his shelter, scaled the rocket and attached the cord. Twenty seconds after he regained the protection of his shelter, the rocket was on its way.

The clouds broke just in time for shipboard viewers to watch the eclipse reach totality. From on board, the sky remained clear enough to view the eclipse for about two minutes, but on Puka Puka it was visible for four minutes.

"It was as though someone had turned out the lights in a room at night," commented one observer.

"The only thing visible were two stars and a brilliant flame around the rim of the moon," said another.

"After the eclipse," related a third, "the lights came on again just as suddenly as they went off."

One rocket still remained in position. This was intended to be used to gather additional information concerning the sun following the eclipse. However, it paid unexpected dividends. At the moment of firing the following morning, a large solar flare occurred and was recorded.

The sixth rocket climbed to 150 miles, transmitted information for 475 seconds. In contrast to the weather during the actual eclipse, it rose under ideal weather conditions. The earlier rockets had reached altitudes varying from 55 to 152 miles.

The *Nike* guided missile booster was used to propel the 210-pound *Asp* rocket to 5200 feet, where the booster dropped off. Then, after coasting for 13 seconds, the *Asp's* propellant ignited to push it to the desired altitude.

All rockets were equipped with detectors which measured Xray and ultraviolet radiations from the sun. Previous rocket experiments had shown these radiations to have a definite effect on the ionization of the upper atmosphere of the earth and thus, on radio communications.

ONE AIM OF THIS EXPEDITION was the determination of the distribution and intensity of "ionizing radiations." This was done by launching the rockets at intervals during the eclipse, including totality. Reaction of the detectors was transmitted by radio to *Point Defiance*.

On Puka Puka, Dr. John W. Evans of Sacramento Peak Observatory (New Mexico), completed preliminary investigations of the results of the shore observatory. However, final results will not be known for several months.

With all rockets successfully fired, Captain Woodhead invited the 11-

CHANNEL JOB—Navy frogmen had to blast way through reef around island before scientific gear could land.

man Puka Puka Council aboard to demonstrate his appreciation of the cooperation they had shown. The crew presented them with helmets, Bibles, cigarettes, costume jewelry and assorted clothing.

By this time, *Point Defiance* had finished her secondary job and had recharted the island. (Either the navigational charts, printed in 1925, were wrong or the island had moved two miles northwest of its previously charted location.)

En route to Hawaii, as *Point Defiance* recrossed the equator, she gave the newly initiated shellbacks an opportunity to pass on to the handful of pollywogs who had first joined the ship at Puka Puka, the painfully acquired lore and traditions of *Neptunus Rex*.

The South Pacific tests, according to Dr. Herbert Friedman, head of the Navy team, furnished considerable information about the sun which scientists had earlier suspected but had not confirmed.

THE ROCKET FLIGHTS showed that the ultraviolet rays come from the chromosphere, the dense 12,000-mile thick gaseous region just above the sun's surface. The temperature in this region ranges from about 11,000 degrees Fahrenheit at the sun's surface to about 36,000 degrees at the top of the layer. At totality, the moon completely blanked out the chromosphere and cut off the ultraviolet rays.

The Xrays come from the *corona*, the lighter gaseous area above the chromosphere where the temperatures increase to about 800,000 degrees. It sometimes increased to as much as 18,000,000 degrees Fahrenheit.

The sources of these rays were found quite simply. As the moon blanked out the sun, signals from the ultraviolet detectors began to drop off in direct proportion to the area covered. When the sun was completely blocked out there was practically no ultraviolet radiation detected.

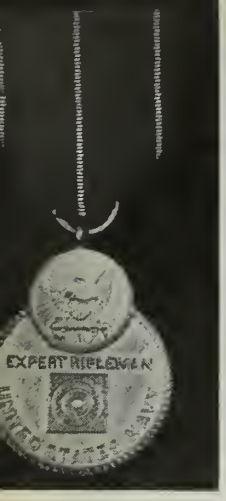
None of the Xrays, however, and only a small amount of ultraviolet rays ever reach the earth's surface. They are absorbed by the atmosphere above 40-mile altitude. Because of this, it has been impossible to study these rays from the earth's surface. The observations made by the instrumented rockets from *Point Defiance* are the first ever obtained. They will be a great help in the study of the solar system and long-range communications.

ROCKET FOREST is erected on copter deck of LSD anchored off Puka Puka.

BECAUSE OF THE BAD WEATHER and heavy clouds, teams on Puka Puka were unable to get good photographs of the eclipse. Both New Zealand and Japan were studying the eclipse, however, and their teams were in good positions to get pictures. These pictures will be made available to the rest of the world.

Another total eclipse will occur 2 October over the Sahara Desert. Although the crew members would enjoy it after their last experience, uss *Point Defiance* does not plan to attend. —Erwin Sharp, JO1, USN.

ISLAND HOME of solar sleuths flies flag of United States and New Zealand.

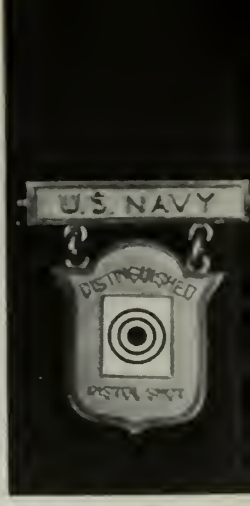


Expert Rifleman

Expert Pistol Shot

Fleet Rifleman's Badge

Navy Distinguished Marksman



Navy Distinguished Pistol Shot

Navymen of Distinction

WITHIN THE PAST several years the Navy has revived interest in small-arms competitions and is once again building up a reputation that it held back in the 1930s.

The year 1958 was the Navy's best, at the National Matches and National Trophy Matches at the world-famed Camp Perry, Ohio, — traditionally the site of the annual national shooting championship contests in the United States.

Both the Navy rifle teams and both the Navy pistol teams finished within the top 20 per cent of the finalists in the National Trophy Team Matches and, for the first time in the history of the matches, both Navy rifle teams won medals in the Infantry Trophy Match, which has been dominated by the Army and Marine Corps for many years.

The interest in competitive shooting has also revived interest in qualifications for the Navy marksmanship awards of Distinguished Marksman —the rifle award—and Distinguished Pistol Shot.

The awards are the highest available for shooting in the United States. They are awarded to members of the armed services by each service (and to civilians by the National Board for the Promotion of Rifle Practice). The basic rules for qualification for all service shooters and civilians are the same.

The Distinguished award is based upon firing done with the current service rifle or service pistol, using service ammunition issued to all firers on the firing line. The rules for weapons and ammunition are very strict and are carefully enforced.

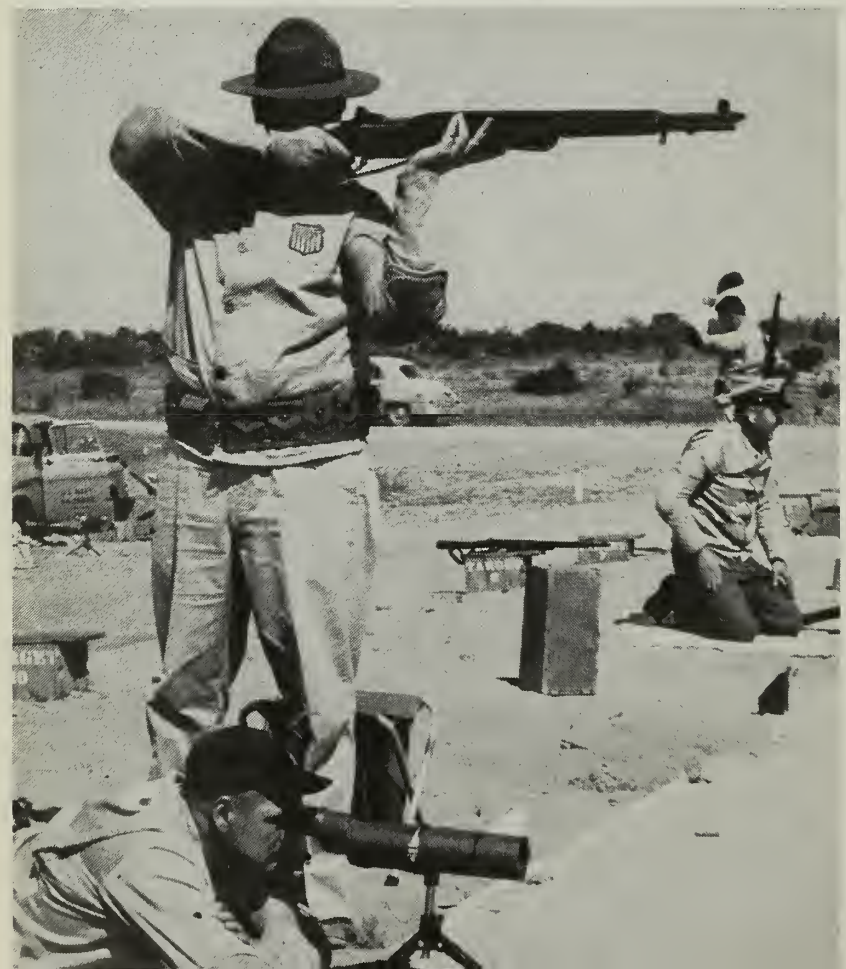
To attain the Distinguished badge, a competitor must place approximately in the top 10 per cent of all non-Distinguished competitors in high-level service matches (Fleet or All-Navy), or the National Trophy Matches, on three different occasions. Less than 5 per cent of all who have tried have been able to achieve a Distinguished badge.

Some shooters have been known to try for 15 to 20 years to win a Distinguished badge. One Navyman achieved his third "leg" in 1951, some 21 years after he was awarded his first "leg."

The occasions on which naval personnel compete for credits are:

• ***Fleet Competitions*** — Both the Commanders-In-Chief of the Atlantic

SPORTSWISE—Navy has recently revived its interest in small-arms competition.



and Pacific Fleets conduct annual Fleet matches prior to the All-Navy matches. Credits may be won either in the individual or team matches, providing minimum scores are attained depending on weather conditions and quality of ammunition. In the individual matches, the competitor must finish approximately in the *top 10 per cent of all non-Distinguished enlisted* competitors. Officers and warrant officers receive supernumerary place badges ("leg medals") commensurate with their scores on a combined list, provided they better the score of the lowest enlisted man who earns a place. In this way enlisted men compete only against enlisted men for places, but officers and warrant officers compete against both themselves and enlisted men. "Legs" may also be won by firing members of teams that win the Fleet competitions.

• ***U. S. Navy Competitions,*** (All-Navy)—Individual and team awards may be won in these matches under the same general rules as for the Fleet competitions.

• ***National Trophy Matches***—Credits may be won in either the Individual or Team Trophy Matches for the service rifle or service pistol. In the individual matches, the competitor must place within the *top 10 per cent of all non-Distinguished competitors* who fire in the match. No limitation is made as to rank, service, etc., in these matches—they are open to any U. S. citizen 16 years old or older. "Legs" may also be won by firing members of teams in the National Trophy Rifle and Pistol Team Matches. "Leg" winners in team matches must be firing members of teams that finish in approximately the top 20 per cent of all teams that fire in the respective team match.

After completion of the U. S. Navy matches, the Chief of Naval Personnel will select team members to represent the Navy at the National Matches. Other Navy shooters may compete in individual matches.

(For additional details of all of the competitions and awards discussed here, see BuPers Note 3590, entitled "U. S. Navy Rifle and Pistol Competitions—1959.")

After an individual has been awarded the three required "legs," he is automatically designated Distinguished by the Chief of Naval Personnel and a suitably engraved gold

DUTYWISE—Interest in small arms sharpens Navymen's eyes for duty with landing parties. *Below:* Chief Gunner's Mate fires during pistol competition.

SHIP AND SHORE—Sailors hold skeet shoot at sea. *Rt:* National winner J. L. Galvao, GM1, admires his trophy.

Dates and Places for 1959 Rifle and Pistol Competitions

Match Type & District	Dates (Tentative) Prior to 15 May	Host As Scheduled
Pre-competition training	18-22 May	CinCLantFlt and CinCPacFlt
Fleet	25-29 May	CinCLantFlt and CinCPacFlt
Pre-competition training	1-5 June	CinCPacFlt
U.S. Navy	8-11 June	CinCPacFlt
National Matches	27 July-29 August	National Rifle Association and the armed services

badge is awarded (see Article 13-131 of the *Landing Party Manual*).

The photographs on these pages point up the increase in interest and competition in marksmanship, not only at shore activities but among ships of the Fleet. They also indicate that the roster of Navy Distinguished marksmen is on the increase.

The road to a Distinguished badge is rough, but the reward is worth the effort. The insistence upon the use of the service weapon and ammunition is tied in with national defense. Here is the setup: Ammunition is issued free on the firing line (and must be used); weapons may be drawn on a custody receipt, and there are no registration or entry fees in any of the matches where credit toward Distinguished is awarded.

This is what is involved in trying for the coveted honor of the Distinguished badge. You'll be stacked up against the best in the Navy, as well as the other services and civilians. Numerically, the honor roll of Navy Distinguished is smaller than the honor roll of naval personnel that have received the Medal of Honor. This points up the fact that the Distinguished badge is not only the top marksmanship award but it's hard to get.

—LCDR John Ralston, Jr., USN.

NAVYMEN get an early chance to try hand at marksmanship as recruits. *Rt:* Pacific Fleet marksmen hold meet.

Crew of USS Aucilla Adopts Orphanage in Spain

AT THE FOOT of Mount Tibidado lies a very poor section of Barcelona, Spain.

Years ago a Spanish priest, Father Amengol, established a school there for the impoverished children of the area. The school consisted of a one-room ramshackle building without heat or light. Father Amengol called it "Stella Maris" or "Star of the Sea." It managed to exist through the years with little or no funds.

In mid-1955 a group of Navymen from USS *Aucilla* (AO 56) came across the school during a tour of the city. When they returned to the ship they couldn't forget the poverty they had seen and the Padre's struggle to provide for his charges.

Before long, the enlisted men formed a committee which paid another visit to the school. When it got back to the ship the committee sent a spokesman to the captain.

With his approval, the school was adopted by the men of the ship. Murray E. Chase, MMC, became the project director. In a short time *Aucilla* decided to stage a Christmas party for the kids.

On 23 Dec 1955 the ship's pickup truck, all dressed up and decorated, wound its way through the streets accompanied by a Navy band and an escort of local motorcycle police. Santa Claus, a passenger in the truck, handed gifts and candy to the children lined up all along the way.

At Nazaret College, where the party was held, all of Father Armengol's 105 charges were on hand to see the sailors' much-talked-of "Papa Noel." During the party each child was given a complete new outfit of clothing plus, of course, the usual candy, soda pop and ice cream. When the party was over, Father Armengol had new textbooks, the children all had new Christmas toys and the people of Barcelona had a true picture of what the American Navyman is really like.

Since that first party, Chief Chase and the members of his original committee have gone from *Aucilla*. But, new committees have been formed and the project has gone on year after year—not just at Christmastime (although *Aucilla* has held a party for the kids every Christmas since '55), but all year.

At present there are still not enough facilities for all the children, and many of them travel miles to the crowded classrooms. However, the school now has enough books, an additional classroom, an auditorium and a chapel.

In addition, the children receive milk every day, and a new school building is almost half completed—principally because of the people-to-people program of the men of *Aucilla*.

Besides material gifts, the *Aucilla* men give the children something much more important—the gift of friendship. When the ship is in port many of the crew go out to the school to visit the children and add a personal touch to the ship's giving. The men also send out buses periodically to bring Father Armengol and the youngsters to the ship for lunch, movies and just plain "looking around."

CAPT Eli T. Reich, USN, *Aucilla's* skipper, hit the nail on the head when he said, "This wonderful action by the men of this tanker is doing much to spread American goodwill throughout Spain."

FRIENDS IN NEED—Men of *USS Aucilla* (AO 56) pose with some of the Spanish school children their ship 'adopted.'

This Is No Breather —

NAVY'S UNDERWATER

Last Month's ALL HANDS *on the Underseas Navy brought in a lot of inquiries from interested readers. Many of them wanted to know more about the Navy's diving school and deep sea diving training. So here's a report on the subject.*

SO YOU WANT to be a deep sea diver! Well, why not? The Navy can use plenty more.

About 200 Navymen are trained each year at the School for Deep Sea Divers in Washington, D.C. The Navy maintains this school expressly for the purpose of training in deep sea and salvage diving techniques and underwater mechanics. In addition, training for Divers Second Class is now conducted at almost every naval district, aboard all submarine and destroyer tenders, and certain rescue and repair ships.

This training is available merely for the asking. That is, if you are eligible.

The eligibility requirements for diving training are few, but rigid. You must volunteer for it, be in top physical condition, have the proper aptitude, motivation and be psychologically adapted for diving duty. All this must be proved, however, even before you can apply for diving training.

If you intend to request diving duty, you will be ordered to the nearest diving activity for screening and examination. There, you will be interviewed by a qualified diving officer, undergo a complete physical examination and receive recompression chamber pressure and oxygen tolerance tests.

After you get by these initial tests, you'll don a complete deep-sea diver's suit and make a test dive. (Under adequate supervision and guidance, of course.) This test dive is considered to be one of the most important phases of your entire screening. It has been repeatedly demonstrated that if you show any reluctance or timidity during your first dive, the odds will be against you. In other words, candidates for diver's training must prove themselves before they are accepted for training.

In addition to proving that you are both physically and mentally adapted for diving duty, you must have a minimum combined mechanical and arithmetical aptitude score of 105 (ARI + MECH = 105). These and the other requirements listed above are spelled out in detail in BuPers Inst. 1500.15C and its 10 references. Before you can be transferred to diving school you must have a written statement in your record—that this instruction has been complied with and that you are considered qualified for diving duty.

QUOTAS FOR INSTRUCTION at the U.S. Naval School for Deep Sea Divers are controlled by the Chief of Naval Personnel. Officer and enlisted personnel who meet the qualifications outlined above should submit their request to BuPers via the normal chain of command. Quotas for the six-week course for Divers Second Class training at the district and Fleet activities can be obtained from the commanding officers of these activities.

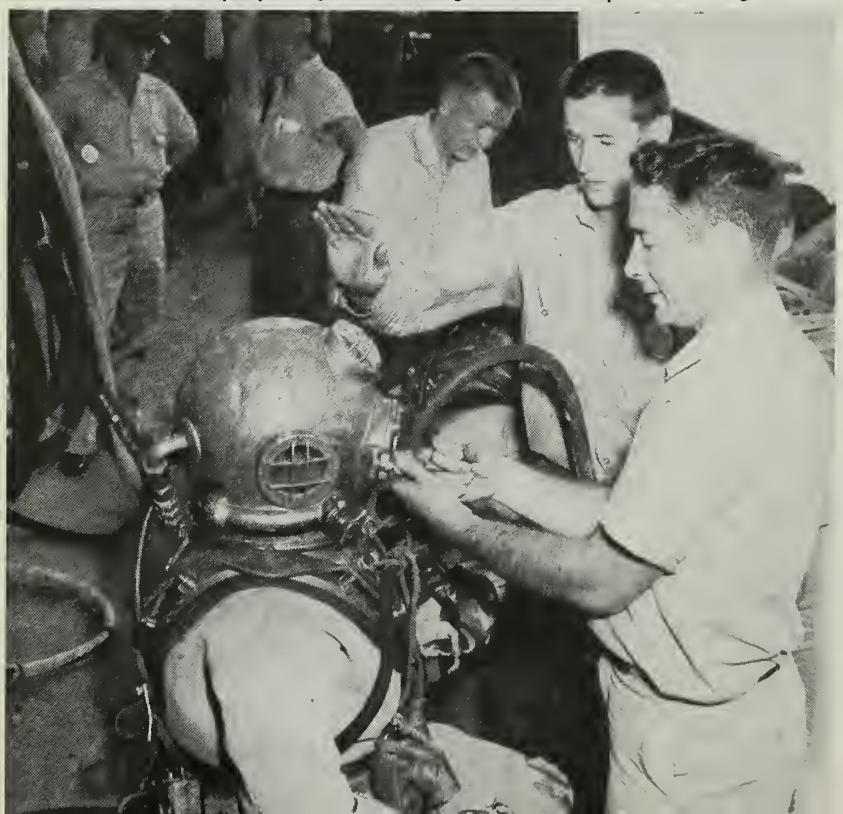
Since you want to become a deep sea diver, we'll assume that you want to "go for broke." That is, start from scratch and in 26 weeks graduate as a proficient, highly trained Diver First Class. To do this, you would attend the School for Deep Sea Divers in Washington, D.C.

The 26-week course of instruction for Divers First Class is a new course which combines the qualifications of the old Diver First Class and those formerly required by Salvage Divers. Just recently the Navy redesignated the various diver classifications. The peace-time designations of Salvage Diver and Deep Sea Diver will be gradually phased out and retained only as a mobilization category.

The 12-week school for enlisted Salvage Divers and the 21-week Deep Sea Diving Courses were dropped and a new 26-week course for Diver First Class was established. The initial class of 45 students taking this "all purpose" course started last June. Since then classes convened in August, October, December and February. Another class began this month, with additional classes scheduled to convene every two months thereafter (See BuPers Inst. 1500.25).

In line with this change, the School for Deep Sea Divers also conducts a seven-week Salvage Diving "cross-training" course to train

BUTTONED UP—Diving student receives signal to rise and head for the water below while preparing for training dive at Deep Sea Diving School.



SCHOOL

Master Divers and Divers First Class to meet the revised Diver First Class qualification if you have not served on board an ARS/ARSD type salvage vessel for a minimum of one year. There's also a 13-week "cross-training" course in deep sea diving for Salvage Divers who are not graduates of the Deep Sea Diving School. Cross-training courses include Scuba familiarization.

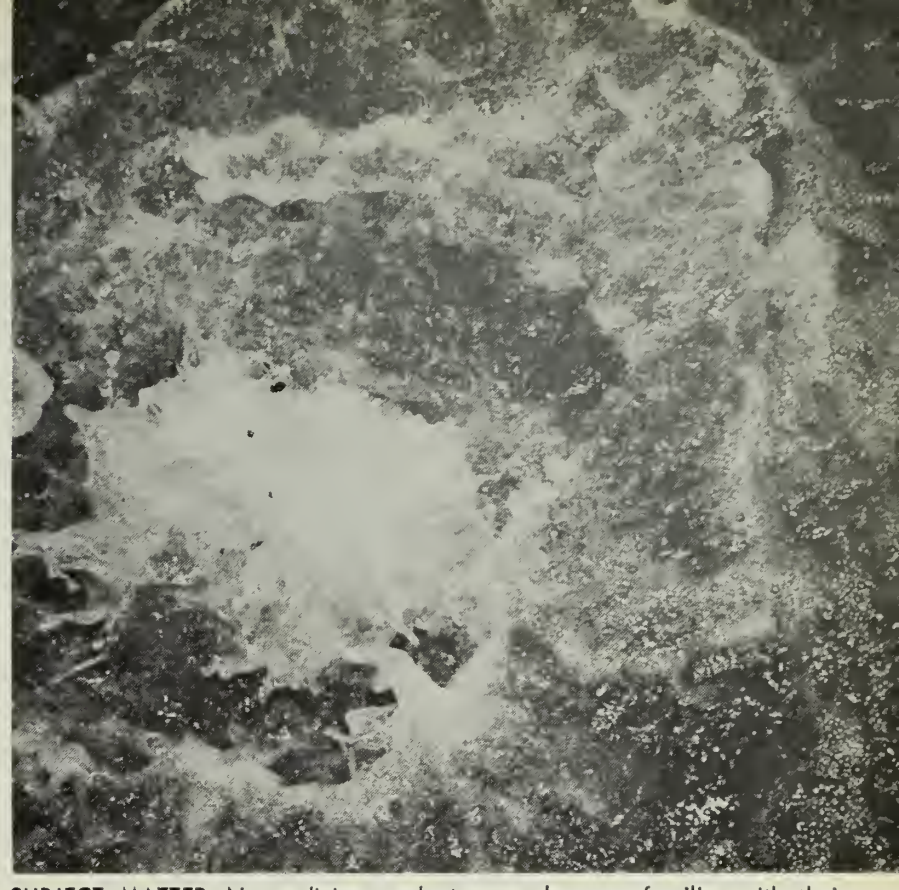
ALL MASTER, Deep Sea, First Class and Salvage Divers are required to receive this cross-training before June 1962. If they fail to do so, they will lose their present diver qualification and be redesignated as a Diver Second Class.

In the past, all students had to be qualified Diver Second Class before they could attend the Salvage or Deep Sea Divers courses. For the new 26-week Diver First Class training, however, no previous diving experience is necessary.

Normally only rated BM, DC, EN, FP, GM, ME, MM, MN, TM, EM and HM can attend the school for Deep Sea Divers in Washington, D.C. However, requests for waivers to permit other petty officers to attend may be submitted to the Chief of Naval Personnel if their duties are closely related to diving duties.

There's a continuing need for divers in the Navy and plenty of room for new blood. Diving is an occupation that's well worth considering. It's a wide open field and has plenty to offer career Navymen who want to do something different, exciting and rewarding.

Don't ask for diving duty just to get out of your present assignment, or to get on a so-called gravy train. Diving is rough and rugged duty and you must be highly motivated for it. Most divers, regardless of their rank or rate, know what it means to work, and work hard. Diving duty or even a course of instruction at the diving school is no place for an individual who is afraid to work or hates to get his hands dirty. In addition to being required to produce a great deal of strenuous physical labor, divers are also required to be proficient seamen, welders and mechanics, as well as specialists in their own particular rating. If you don't think so, just ask any Navyman who wears the diver insigne (a deep sea diving helmet) on his right sleeve. Better still, just watch any one of them go about their duties during a diving operation.



SUBJECT MATTER—Navy diving students soon become familiar with their watery medium. Here, diving tank's surface is churned by bubbles from diver.

Future divers get their first taste of work, if they don't already know what it is, shortly after reporting to diving school. From the day they begin their training until they finish it six months later, they are constantly on the go. They have eight 50-minute periods of training daily. And training in this case, is not limited to classroom instruction. There's plenty of hard work—both mental and physical—during the six months of training, and there's no "fluffing off." All diving students are required to maintain a 3.0 average or else be dropped from the school.

DURING THE FIRST few days at the school, the students—like those at practically any other school—must register, receive manuals, study handouts and other materials needed at the school. When this is completed, the future divers are briefed on the mission, purpose and regulations of the school. Then, they are told what is expected of them during their training, where they stand in regard to student-instructor relations and are briefed on the various needs for divers in the Fleet.

After this preview of what's in store for them, the students are given a thorough physical examination—a preliminary one by a Hospital Corpsman, and then a complete medical examination by a qualified Diving Medical Officer. After this, the students enter the igloo for a recompression chamber run in which they go down to the equivalent of 112 feet. They return to the 60-foot level where they remain for 30 minutes. During the half-hour spent at the 60-foot level, the students breathe pure oxygen in an effort to determine if they are susceptible to oxygen poisoning. At this point, any student who does not have the ability to withstand pressure or cannot pass the oxygen tolerance test is dropped from the school.

Those who qualify journey to the Naval Receiving Station on the opposite bank of the Anacostia River for a swimming qualification test. All diving students who are not first class swimmers must take additional swimming until they qualify.

CLASSROOMS, dry and wet, teach prospective underwater men diving techniques. *Left:* Sailor enters diving barge. *Rt:* Lesson below begins.

With these essentials out of the way, the students now get into the work for which they came to the school. They start with five periods devoted to the nomenclature, functions and operation of all parts of the standard deep sea and lightweight diving outfits and Scuba. The Navy uses several different types of diving equipment depending upon the circumstances and the job to be done.

To a considerable extent, diving has been thought of primarily in terms of depth—shallow water and deep sea. These two terms have been used so frequently that the whole subject of diving has unconsciously been divided into these two categories.

SHALLOW WATER DIVING literally means diving in less than 36 feet of water, while deep sea diving takes in everything in excess of 36 feet. This distinction has led many persons to consider depth to be the primary consideration in diving. Strictly speaking, in terms of diving where the only consideration is descending to some depth and returning to the surface, depth is the primary consideration. However, diving must be associated with accomplishing particular tasks under varying conditions. The type of work to be undertaken, location of the work, the extent of the operation, and the climatic conditions, as well as the depth, are the determining factors in deciding what person will make the dive, the type of diving equipment to be used and the method of accomplishing the task.

The Navy's diving equipment is divided into two classes—Deep Sea Diving and Shallow Water Diving outfits. All of this gear is further classified as "surface-supplied" gear.

As the name implies, surface-supplied diving gear is supplied with air or some other breathing medium from the surface by a hose. This type of gear is used mainly where the diver's work is confined to a rather small area and where stability rather than mobility is important. Great depths and other special conditions may also require use of surface-supplied rigs. The fact that air supply duration is not limited is a definite advantage of this type of equipment.

THE NAVY'S STANDARD deep sea diving outfit consists of a helmet and watertight dress, weighted belt and shoes, supply hose and control valve, non-return valve, and a spring-loaded exhaust valve.

The 83-pound belt and the 35-pound shoes (17½ pounds each) overcome the positive buoyancy of the dress and helmet. (The helmet weighs 54 pounds and the dress 18½, but when filled with air, they become buoyant.) The hose supplies the air to the diver, and he controls the quantity with the control valve. The non-return valve prevents the escape of air from the dress back up the hose if the supply pressure drops because the hose is ruptured or any other accident occurs. The exhaust valve is adjustable and maintains the desired pressure in the suit.

The deep sea outfit has been used for a considerable number of years with remarkable success. In addition to all submarine rescue and salvage work undertaken in peacetime, almost all salvage work of any extent undertaken during World War II was accomplished using this type of equipment.

Designed for extensive rugged diving work, the deep sea diving outfit provides the diver with the maximum physical protection. The general types of work that call for the use of deep sea diving equipment include:

- *Submarine Salvage*—the initial inspection, handling the rescue chamber, placing slings under the stricken sub for pontoons, handling pontoons, and attaching hoses for blowing and venting.
- *Ship Salvage*—internal inspection, internal repairs, installation of large patches on ship hulls, and construction of cofferdams.
- *Harbor Work*—where visibility is poor, working around stone walls, pilings, or where there may be sharp projections.
- *General*—diving to depth requiring decompression, and working in heavy tideways.

These are merely illustrations of the type of work undertaken using the deep sea diving outfit. They are not intended to be all inclusive or specific. In addition, there are many diving operations that involve all the above examples which are undertaken in shallow depths but require the use of the rugged deep sea equipment regardless of the depth at which the work is being done.

The Navy uses three different types of deep sea diving outfits. They are simply referred to as outfits No. 1, No. 2, and No. 3. The No. 1 outfit is a heavy-duty outfit and contains all the material required for two divers plus additional spares to keep the outfit in repair for approximately one year. Diving outfit No. 2 is similar to the No. 1 unit, except that it is provided with only one helmet. This equipment is assigned to all "diving-type" ships. They include ANs, ARSs, ARSDs, ATFs, ASRs, ADs, ASs, ARs, and AVs. The mission of each of these types requires deep sea diving or underwater salvage operations. Each also has an allowance for rated divers.

The No. 3 outfit is a special deep sea diving outfit issued only to submarine rescue vessels. This outfit is basically the same as the No. 1 and 2 outfits but it has a helmet that has been modified to include a means of converting a helium-oxygen mixture by recirculating it through a carbon dioxide absorbent.

The hydrogen-oxygen outfit is needed to undertake the deep diving necessary to rescue men from sunken submarines and salvaging the stricken submarine.

THE LIGHTWEIGHT DIVING OUTFIT (LWT) consists of a dress, mask, hose, belt, shoes, control and non-return valves. Its essential part is the full-face mask. This is supplied with air from the surface through a hose. A non-return valve and control valve are mounted on the right side of the mask, and an exhaust valve is provided on the left side. This mask can be used alone if desired, allowing the diver almost as much freedom, within limits, as with self-contained apparatus.

A light, flexible dress is provided for use with the mask when desired. Since air enters and exhausts directly from the mask without entering the dress, there is no excess of buoyancy with this rig. The weights provided can therefore be lighter than those used with the deep sea rig. The weights used with the LWT outfit are equipped with a quick release fastener to permit them to be dropped rapidly in the event of an emergency. The lightweight mask, belt and shoes weigh only 85 pounds compared to 172 for the deep sea diver's outfit.

The lightweight outfit can be used to accomplish a considerable number of jobs where the working and diving conditions are not severe and access to the work is relatively unrestricted. It's ideal for jobs such as inspection, searching, clearing lines and for minor external ship repairs. The LWT outfit can be used up to a depth of 60 feet—the safe limit of the compressor furnished with this outfit.

The standard lightweight diving outfit contains sufficient equipment for two divers and spares to maintain the outfit in repair for a reasonable length of time. This outfit is furnished to ARDs and ARGs, as well as to all of the "diving-type" ships listed above. Non-diving ships such as AGBs, AGs, ARCs, ARLs, LSDs, and LSTs (when assigned to mine warfare operations) also have an allowance for a Diver Second Class and carry LWT outfits aboard. In addition, about 35 different types of non-diving ships—ranging from coastal minesweepers to all destroyer types, and from cargo ships to carriers—are each assigned an allowance of one special lightweight suit (LWT special) but do not have allowances for qualified divers.

INNER SANCTUM—Theoretical dives in recompression chamber *(right)* simulate conditions up to 200 and 300 ft. *Left:* Breast plate is secured to suit.

AFTER LEARNING ALL the ins and outs of the various types of diving suits (this includes testing and maintenance of all standard diving gear) the students are ready to tackle deep sea diving and procedures.

This is, perhaps, the most important part of the training that the student divers receive as it is during this phase that they get their first basic instruction in diving techniques. This training begins with three periods of lectures: Diving signals and communications; tending the diver; dressing and undressing the diver; the procedures for descent; working on the bottom; the procedures for ascent; log- and record-keeping and safety precautions.

Strict safety rules are set down in school regulations, diving manuals and other directives and all students, and instructors as well, are required to practice these safety regulations.

After being lectured on diving techniques and procedures, the students observe training films to see how these things are done. Then they practice dressing and undressing the diver. This training develops teamwork among the diving tenders and develops proper standardization of dressing methods.

With all these factors under their belts, the students then go to the school's shallow water tanks where they make their first dive. Here they practice the diving techniques they learned in the classroom. On their first dive, the student divers practice the various hand signals, learn how to manipulate all the valves on the helmet, and practice all of the other basic techniques and procedures.

After this initial familiarization dive, they make a series of working dives during which they do pipefitting, knot-tying and flange assembly. When they master these simple problems in the deep sea diving outfit, they go through a similar routine with the lightweight diving suit.

After this practical training the students again return to the classroom for a series of lectures and movies on diving physics and physiology. This phase of training acquaints the students with the physics of air and water pressure and the effects they have on the human body. Here, they learn the various methods of decompression—stage, regular and surface—and receive training in the practical application of the standard diving recompression tables. To do this, they make theoretical dives in the recompression chamber which simulate depths up to 200 and 300 feet.

SEA MONSTER—Diver is helped into his protective rubber suit while learning underwater ways.

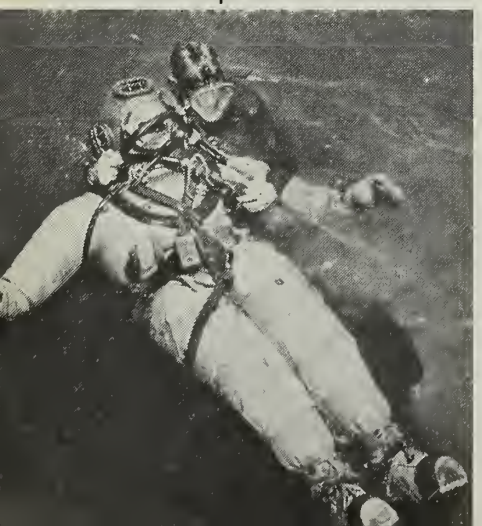
Medical aspects of diving and the treatment of diver's diseases and injuries are next on the agenda for the diving students.

All deep sea divers are also required to know how to use all types of diving equipment. Thus, the instruction at the school takes in the use of self-contained as well as surface-supplied diving gear.

SCUBA TRAINING is one of the major stumbling blocks at the school. About 20 per cent of those who are dropped from the school do so because they fail to meet the Scuba qualifications. These students are not in tip-top physical condition and aren't good swimmers. (If you are planning to attend the school for deep sea divers, it would be to your advantage to brush up on your swimming before you report.)

When this Scuba training is completed, the students get into the various techniques of helium-oxygen diving. As said earlier, helium-oxygen is used for dives at extreme depths. When air alone is used, there is a limit on the depth to which a diver can descend and still maintain his mental control. To enable divers to attain greater depths, it is necessary to substitute a synthetic breathing medium for air.

HELPING HAND — Using shallow-water gear diver helps student who has blown up from too much air.



After years of extensive research, the Navy's Experimental Diving Unit came up with a helium-oxygen mixture that proved to be the best substitute for ordinary air. Through use of helium-oxygen under pressure, divers are more mentally alert than when breathing normal air. The sense of depth commonly experienced when breathing air is greatly reduced. When using helium-oxygen, divers can work considerably harder and for longer periods. The advantages of helium-oxygen mixture over that of normal air are effective only at depths greater than 150 feet.

Since the helium-oxygen technique is entirely different from air diving and more complicated, a greater percentage of the school's curriculum is devoted to helium-oxygen diving.

Other training at the school includes shop and underwater welding, underwater cutting, submarine rescue and salvage, ASR and ARS seamanship, ship salvage projects, use of the submarine rescue chamber and underwater demolition. When this training is completed, each of the students is designated as Diver First Class and is normally ordered to duty aboard a diving-type ship.

CDR George H. Mahoney, USN, a veteran submariner and deep sea diver, commands the School for Deep Sea Divers and the Experimental Diving Unit. There are 10 other officers on the staff. The school also has 45 enlisted men assigned to its staff.

In addition to the 26-week Diver First Class course and the cross-training described earlier, the diving school conducts the following courses for enlisted personnel:

• ***Medical Deep Sea Diving Technicians***—This 28-week course convenes every two months and is available to rated Hospital Corpsmen. It is the same as the 26-week Diver First Class Course but includes two additional weeks of training in analyzing gas mixtures.

• ***Diver Second Class*** — Classes convene in January, March, May, August and September. This is the same six-week course conducted at activities within each of the naval districts except the 4th, 9th and 15th; at COMNAVPHIL; aboard USS *Luzon* (ARG-2) and all AD, AR, ARH, ASR, AS, ARS and ARSD type ships.

• ***Helium-Oxygen Refresher*** — As the name implies, this two-week refresher course in helium-oxygen diving is for Deep Sea Diving Officers, Diving Medical Officers, Master Divers, Diver First Class and Medical Deep Sea Diving Technicians who have not been working with helium-oxygen.

• ***Diver Requalification***—This two weeks of training is for those divers assigned to activities that do not have facilities in which they can requalify.

The school also conducts the following officer courses:

• ***Diving Officer***—This is a 26-week course, similar to that given for Diver First Class. It convenes every two months and is open to line officers without previous diving experience.

• ***Diving Officer***—This is a 10-week course that also convenes every two months. Officers ordered to this training are either prospective commanding or executive officers of submarine rescue vessels.

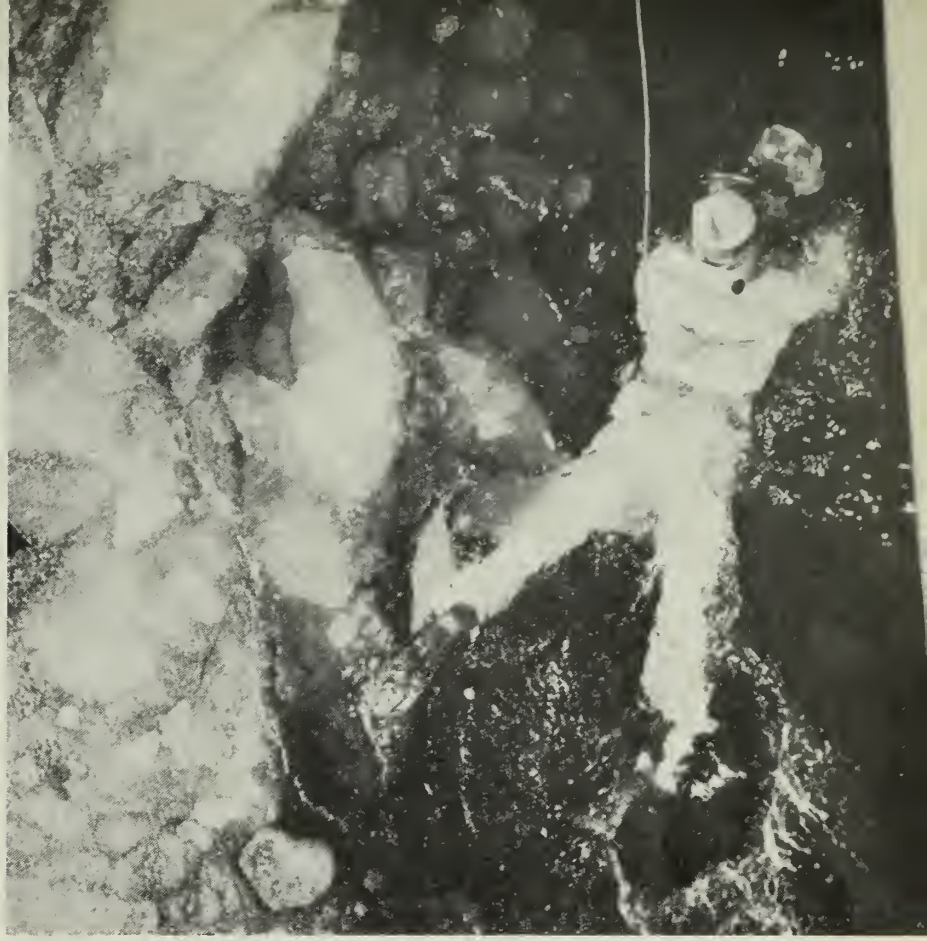
• ***Salvage Officers***—This is a 16-week course for line officers who have not had any previous diving experience. (ARS, ARSD type ships).

• ***Salvage Officer*** — Prospective commanding and executive officers of ARSs and other ships whose mission includes salvage, and EOD officers, attend this five-week course. No previous diving training is required and officers do not have to be volunteers to attend. Classes convene every Monday.

• ***Engineering Duty Officers***—This is a special five-week course conducted at the request of the Bureau of Ships, to qualify selected Engineering Duty Officers in ship salvage and diving techniques.

• ***Medical Officers***—This is an eight-week course for submarine medical officers. It convenes in April and October each year. The school also conducts a two-week course in August for medical officers being assigned to activities that have recompression chambers.

Together these courses and instructors who run them play a big part in preparing the Navyman for many of his important jobs underseas. —H. George Baker, JOC, USN.



ICE GOING—Skin diver LCDR H. R. Walker takes camera into Antarctic water for picture of *Glacier's* screws.

Antarctic Skin Diver

AN UNDERSEAS NAVY enthusiast, LCDR H. R. Walker, USN, can tell you first-hand that there's quite a difference between skin diving off Florida and the 29-degree waters of the Antarctic.

He became the first man to attempt skin diving in the freezing waters of the Antarctic when he volunteered to photograph the propellers of USS *Glacier* (AGB 4). The photographs were needed to determine the effects of heavily congested ice on a new type propeller installed on the Navy icebreaker.

Glacier's unique 28-ton propeller has a diameter of 17 feet, is constructed of a nickel-bronze alloy and allows for more pliability than the brittle metal used in conventional propellers on other icebreakers.

After 20 minutes in the freezing water, LCDR Walker surfaced, discarded his snorkle apparatus and reported the propellers were in excellent condition—also that his diving suit kept him warm enough to stay submerged another 30 minutes. He further remarked that he preferred diving at Coral Gables rather than the frigid waters of McMurdo Sound. There's no accounting for taste.

COLD DRINK—Dressed for cold, LCDR Walker dons mask and enters icy water.

LETTERS TO THE EDITOR

This section is open to unofficial communications from within the naval service on matters of general interest. However, it is not intended to conflict in any way with Navy Regulations regarding the forwarding of official mail through channels, nor is it to substitute for the policy of obtaining information from local commands in all possible instances. Do not send postage or return envelopes. Sign full name and address. Address letter to Editor, ALL HANDS, Room 1809, Bureau of Naval Personnel, Navy Dept., Washington 25, D. C.

Ocean Tug Records

SIR: In the December 1958 issue of ALL HANDS you carried CDR R. F. Gill's letter reporting the shakedown cruise of USS *Chetco* (ATO 166) from Galveston, Tex., to Brisbane, Australia, a total distance of about 9500 miles of which one leg was 7200 miles long and took 65 consecutive days.

As an ex-tug and salvage ship skipper, I cannot top the 7200-mile leg or 65 consecutive days underway with tow. However, I can offer a new target of 9995 miles for a single tandem tow of three barges, also on a shakedown cruise.

In addition to the total distance for one tow, I would like to put up an additional target for tug skippers (or ex-tug skippers) to take a pot shot at. That is, the total number of tows during a single tour in the same ship.

On 21 Jul 1944, USS *Wateree* (ATA 174) (then known by ATA 174 only) was commissioned at Orange, Tex. After shakedown training she proceeded to New York for her first tow —a tandem tow of three 220-foot wooden-hull barges. These barges were designed with conventional ship bow and stern with high sides, 25 feet from keel to main deck, and equipped with a rudder. Berthing facilities were provided for a crew of six men. Cargo in each barge consisted of two LCMs deck-loaded with 2500 drums of lube oil in the holds.

We departed New York with tow on 8 Sep 1944, arriving at Eniwetok on 29 Dec 1944. Brief stops were made at Mayport, Fla., (for hurricane evasion), San Diego and San Pedro, Calif., and Pearl Harbor. The total distance reported by the ship's navigator was 9995 miles. It is interesting to note that the first leg, New York to the Canal Zone, was made by actual tandem tow using 1200 feet of 12-inch manila hawser between tows. The remainder of the trip was made with the standard conventional Christmas tree rig of 600 feet of one-and-five-eighths inch wire rope between tows.

From 8 Sep 1944 until decommissioned 28 months later, on 15 Jan 1947, ATA 174 made a total of 77 tows, moving 128 ships and craft (does not include target sled towing) without the loss of a single tow, steaming a total distance of 61,384 miles; 40,447 miles with tow and 20,937 without tow. When the ship was decommissioned, the original tow wire, slushed down many times, was still in service.

My three-year tour in USS *Pinola* (ATA 206), 1949 to 1952, devoted almost exclusively to target towing, would probably beat the above 77 tows, but, for my lack of record keeping, cannot be reported.—R. W. Taylor, LCDR, USN.

• *As we said in the reply to CDR Gill's letter, he could rest assured that other seagoing statisticians would let us know if* Chetco *takes the cake.*

With these outstanding records turned in by tugs, let's see if we know just where we stand.

USS Penobscot *(ATA 188) claims a steaming record of 26,970 miles in 11 months.*

USS Salish *(ATA 187) brings out the fact that in a single month it sailed 4870 nautical miles—then brought in a ringer by stating that by adding backing and filling, it boosted this to 7152 engine miles. This was further emphasized by the statement that she sailed 19,488 nautical miles in one seven-month period.*

USS Yuma *(AFT 94) tossed her own record into the hopper. She claims towing 105 times her own weight (137,768 tons of shipping) more than half-way around the world (11,967 miles) in one five-and-a-half month period.*

USS Chetco *(ATO 166) mentions the fact that she took three tows 9500 miles which required 84 days underway. One leg of this journey (Panama to Noumea), a 7200-mile jaunt, was made non-stop in 65 days.*

USS Wateree *(ATA 174)—the latest record—claims a tandem tow of three barges 9995 miles in 113 days.*

You want us to settle the little matter of which did what the best? Not on your life. Besides, someone else will be sending in a "new" record one of these fine days that will most likely top them all.

We would, however, like to doff our hats to these little ships with their great power and stability, and to the expert seamanship that it takes to handle them.

For more on small ships see p. 30.—ED.

Nimitz Signed It

SIR: Your quiz in the October 1958 issue was tops, but the answer you have listed for question number 60 doesn't stack up with what I remember.

I recall listening to the Japanese surrender ceremony on the radio while stationed at Pearl Harbor. I feel certain that General Douglas MacArthur signed the formal surrender.

Is my memory slipping?—D. S. S., CDR, USNR.

• *Your memory is good, but you're not reading so well. Douglas MacArthur did sign a surrender document on board* USS Missouri *(BB 63) in Tokyo Bay, but it was for the Allied Powers. Fleet Admiral Chester W. Nimitz signed for the United States.*

Question number 60 asked for the person who signed "the formal surrender of the Japanese Imperial Government on board Missouri *as representative for the United States."*

And that was Admiral Nimitz.—ED.

Right Joke, Wrong Credit

SIR: On page 53 of the December issue of ALL HANDS, a cartoon appeared which was credited to F. Mercado, SKSN.

I drew that cartoon; if you look real hard you can see my name printed in the lower left hand corner. I'd appreciate it if you would clear up this point.—David J. Majchrazk, SN, USN.

• *Sorry about that, but apparently the man that handles cartoons enjoyed yours so much that he failed to notice the name on the front.*—ED.

Bronze Star Medal

SIR: I have heard that persons awarded the Bronze Star Medal for heroism during wartime receive an extra ten per cent of their pay upon transfer to the Fleet Reserve. Is this true or not? If so, is the 10 per cent figured on basic or retainer pay? —I.M.M., BM1, USN.

• *The award of a Bronze Star Medal with Combat Distinguishing Device does not automatically establish eligibility for the 10 per cent increase in retainer pay. Determination as to whether the award constitutes "extraordinary heroism" in accordance with the law which authorized such increase, is made in each case by the Secretary of the Navy.*

If granted, the 10 per cent is figured on retainer, not basic pay.—ED.

Name That Destroyer

SIR: On page two of the December 1958 issue of ALL HANDS is an article entitled "Duty with DESRON Eight." Appropriately enough (in so far as we are concerned) on the same page is a photo of the four ships of DESDIV 262 in one of their customarily perfect line-of-bearing formations.

Whereas we do not wish to detract from the luster of the "Eight Bailers," nonetheless, we do consider the old adage: "Credit where credit is due" is applicable. We would appreciate recognition of the four destroyers shown in the photo—Wardroom of USS *Charles P. Cecil* (DDR 835) and Radio Crew of USS *O'Hare* (DDR 889).

• *We checked with an old (very old) destroyerman on the staff who leaned on his cane and in a quavering voice said, "In the Old Navy, the actions performed by the destroyers spoke for themselves. They needed no recognition."*

We assured him that this was the "New Navy" (he just shook his head and muttered something), but we asked him to name the destroyers shown on page two of the December issue—from left to right, are: USS *Stickell* (DDR 888), *Cecil* (DDR 835), *Corry* (DDR 817) and *O'Hare* (DDR 889).—ED.

Current Time in Rate

SIR: Two questions have caused many heated discussions in the first class quarters aboard this ship. Would you straighten us out?

Here's the situation:

(1) A man was rated PO1 in November 1955. In February 1958 he was reduced to PO2 at captain's mast as Non-Judicial Punishment. At the request of his present commanding officer, the Bureau reinstated him as PO1 in October 1958. When is he eligible to take the test for CPO?

(2) A CPO, who was rated in November 1944, was reduced to PO1 in April 1958. When can he take the test for CPO?—J. M. P., YN1, USN.

• *The question here seems to be: does all time served in a rate count for advancement purposes, or does current consecutive time in rate only count? The answer is current consecutive time. According to BuPers Inst. 1430.7C, previous time in present or higher pay grade does not necessarily establish present eligibility for advancement.*

At present, a PO1 must have three years in grade before he can be advanced to CPO. Since your first man was demoted to PO2 and then reinstated to PO1 in October 1958, that is his present date of rate. This means he will be eligible for advancement in October 1961 and can take the Navy-wide examination in February 1962. (CPO examinations are given only once a year.)

IT'S N.E.W.S.—Whitehat experts man controls of Navy's Electronic Warfare Simulator at Naval War College. *NEWS* can simulate naval battle conditions.

The same thing is true of the CPO who was busted. He attained his present rate in April 1958; adding three years makes it April 1961. He would therefore be eligible to take the service-wide examination in February 1961, for promotion after April.—ED.

First Twin-Jet Fighter

SIR: I noticed the picture of the F4H-1 on page 41 of your November 1958 issue. I believe the caption is wrong in stating that the F4H-1 is Navy's first two-seat twin-jet all-weather fighter.

The Navy had one other two-seat, twin-jet all-weather fighter, the Douglas F3D-1 and 2. I flew these aircraft in 1953 at the Marine Corps Air Station, Cherry Point, N.C. During the same period they were being flown at the Naval Air Station, Jacksonville, Fla.

Being an ex-Navy man I still read and enjoy your publication, but since I am now in the Marine Corps, I especially enjoyed your article "Here Come the Marines."—R. L. Duvall, CAPT, USMC.

• *The word supersonic is missing from the F4H-1 cutline. We're not quite sure how it got away, but it's gone. The statement as it stands is wrong, as you pointed out.*

The cutline for the F4H-1 should have read "Navy's first supersonic two-seat, twin-jet all-weather fighter." The F3D-1 and 2 were, as you described, also two-seat, twin-jet all-weather fighters.

By the way, if you happen to see a misguided gremlin with the word supersonic tucked away, please set him straight for us.—ED.

ICE WATER—Fleet tug *USS Nipmuc* (ATF 157) passes floating berg off coast of Greenland while working with MSTS sea lift of supplies to Arctic bases.

Ship Reunions

News of reunions of ships and organizations will be carried in this column from time to time. In planning a reunion, best results will be obtained by notifying the Editor, ALL HANDS Magazine, Room 1809, Bureau of Naval Personnel, Navy Department, Washington 25, D. C., four months in advance.

• USS *Nevada* (BB 36)—The sixth annual reunion will be held at the Lafayette Hotel, Long Beach, Calif., on 24 October. For additional details, write to Darwin D. Stilwell, 1128 Temple Ave., Long Beach, Calif.

• USS *Oklahoma* (BB 37)—World War I crew members will hold a reunion at the Traymore Hotel, Atlantic City, N. J., on 2 and 3 May. For further information, write to Edward H. Lutz, 673 Lindley Rd., Glenside, Pa.

• *38th Seabees*—The first reunion of World War II members of the 38th Seabees will be held at the Commodore Perry Hotel, Toledo, Ohio, on 11 and 12 August. Write to George A. Green, 1926 Standard Building, Cleveland 13, Ohio, for further information.

• *58th Seabees*—The 13th annual reunion will be held at the Statler-Hilton Hotel, Buffalo, N. Y., on 17, 18 and 19 July. For more details, write to Thomas Sapio, 169 Leslie St., Buffalo, N. Y.

• USS *Goodrich* (DDR 831)—All members who served on board from 1953 to 1956 and who are interested in holding a reunion in New England may write to William Sarboukh, Jr., 106 Cherry St., South Bound Brook, N. J.

• USS *Tide* (AM 125)—All who served on board, who desire a reunion in the Midwest next summer, may write to G. Mike Welch, 1970 South Milwaukee, Denver 10, Colo.

• USS *Ancon* (AGC 4)—The 12th reunion will be held in Boston, Mass., on 30 May. For further information, write to Peter Stenberg, 329½ Freeport St., Dorchester, Mass.

• *Commanding Officers, Destroyer Escorts, WW II*—The 10th annual reunion will be held at the New York Yacht Club, New York City, on 23 April. For details, write to Keith M. Urmy, 2 East 34th St., New York 16, N. Y.

• *80th Seabees*—The 5th reunion will be held on 5 September in New York City. For more information, write to Gilbert S. Hampton, 60 Stratford Pl., Newark 8, N. J.

• *Submarine Veterans of World War II*—The 5th reunion will be held at the Browns Palace Hotel, Denver, Colo., 13-16 August. Additional details may be obtained from Ernst T. Rosing, 1409 S. East Ave., Berwyn, Ill.

• USS *Bannock* (ATF 81)—All who served on board during World War II and who are interested in holding a reunion may write to Bob Craft, 1026 South Adams, Fort Worth 4, Texas.

• USS *LST 129*—All who served on board from April 1944 to February 1945 who are interested in holding a reunion may write to Frank Hatch, 1809 Harvard Rd., Richmond 29, Va.

Eligibility for Medals

SIR: Can you tell me where and how I could get information regarding awards of medals and citations? My primary interest concerns certain actions involving USS *Boise* (CL 47). For instance, was she awarded citations for participating in any of the following: (1) Invasion of Leyte Gulf, 20 Oct 1944; (2) Battle of Surigao Strait, 25 Oct 1944; (3) Invasion of Mindoro, 15 Dec 1944?

I would also like to know if this ship was part of Task Unit 70.1.4 during the period 15-19 Dec 1944.—W. F. D., CHGUN, USN (Ret.).

• *Anyone who served in* USS Boise *(CL 47) during the periods 13 Oct-29 Nov 1944, 12-18 Dec 1944, 4-18 Jan 1945 and 14-28 Feb 1945 is entitled to wear the Philippine Republic Presidential Unit Badge. Since you were in this ship during these times, you are eligible to wear the ribbon which consists of a ribbon bar only. It is not stocked or furnished by the Navy, but may be purchased in military supply stores.*

Boise *did not earn any other citations while you were attached. During the period 15-19 Dec 1944, she was steaming in company with Task Group 77.3. However, we have no record that she was a part of Task Unit 70.1.4.*

If you figure that you are eligible for any medals or awards, you may submit a request via your Commandant, to the Chief of Naval Personnel (Attn: Pers E24).—ED.

Divers Distinguishing Marks

SIR: I have been asked a question many times by both naval and civilian personnel that I cannot answer. Maybe you can help.

As you know, all qualified Navy deep sea divers wear an emblem on their uniform showing that they are a Master, First or Second Class Diver. Why don't Scuba divers or UDT personnel have a distinguishing patch? I feel that a qualified Scuba man is as important as a deep sea diver and should be shown some recognition. How do you feel about this? — Will Jacobs, Hartford, Conn.

• *That's a good question. Now here's the scoop on divers' sleeve patches.*

All qualified deep sea divers are trained to use all types of diving equipment including the self-contained breathing apparatus used by the free swimmer or Scuba diver. But Scuba divers are not qualified or trained in the use of surface supplied or deep sea diving gear.

All graduates of the Navy's Underwater Swimmers School at Key West, Fla., are designated Scuba divers. However, upon completion of the school, the majority of them go on to EOD (Explosive Ordnance Disposal) or UDT (Underwater Demolition Team) training.

When they complete this more advanced and highly specialized training, they drop their basic Scuba designator in favor of the higher qualifications and designations.

Although the Navy uses Scuba divers quite extensively, there's only a limited number of billets for Scuba divers. When Scuba diving is required and authorized, it is generally done by qualified deep sea divers, explosive ordnance disposal technicians and underwater demolition men.

EOD technicians, who are qualified Scuba as well as Divers Second Class, are authorized to wear an EOD distinguishing mark on their right sleeve. However, this mark does not indicate that the individual is a qualified diver. It consists of a mine superimposed on a crossed torpedo that points down to the right, and a bomb that points down to the left.

As yet, UDT personnel, who are also qualified Scuba divers, do not have an authorized distinguishing mark.—ED.

Third Salvo on Hashmarks

SIR: I have read the letter to the Editor from R.T.S., BMC, USN, which appeared some time back (in the September 1958 issue). I must say, I was surprised to see the "second salvo," regarding hashmarks, come from a Boatswain's Mate.

I think if the hashmarks were cut down to two inches and worn horizontally, it would just be the first step to extinction.

This happened in the Air Force. Besides that, there's the added expense of sewing on new ones.

The hashmarks we now wear make a career man's uniform look sharp, and I for one am looking forward to sewing on my first one in about 16 months. The present hashmarks are traditional, and I'm for tradition.

Today's sailor wears the best looking uniform on liberty, so why change it? I feel sure that many other sailors in this man's Navy will agree with me.

I know that Navymen sew on one hashmark after another with great pride. Let's not take that away from the career man!—C. B. L., MU3, USN.

On Changing the Uniform

SIR: In answer to your request, "What's the reaction in the Fleet?" on suggested uniform changes from letters to the Editor in the September 1958 issue of ALL HANDS, I think the BMC had some very good ideas and I fully agree with him.

But as I am only a lowly YN3, my main concern is the uniform I have to wear—those old traditional 100 per cent wool melton cloth "snowsuits." When is the Navy going to make use of the new synthetic materials now under development? I think we would even be satisfied with the old traditional cut and design of the uniform if they brought in some cooler material for a summer uniform. I would like to see a new blue summer uniform adopted, made out of a cool material and do away with the impractical whites.

The present blues are fine as a winter uniform or where climate conditions call for 100 per cent wool. But, take a place like sunny San Diego, where you have to wear blues. They just don't go with an 88-degree temperature or in a warm office. I think the Navy should have a new motto—"Practical before Traditional." — H.E.K., YN3, USN.

SIR: Why can't they do a little changing to the enlisted men's uniform below chief? Enlisted men could have the same type uniform as the CPO. I'm sure that the better part of the Fleet would go along with that, too. (Anyway the whitehats would.)

The other armed forces (Army, Air Force, Marines) have the same uniform from the very bottom to the very top (with exceptions of the rank insignia). Why should we be so different?

Believe me, I am proud of the whitehat's uniform, but not because of the way it is made. If you say we have to stick with tradition, then why aren't we going to sea in wooden ships?—G.H.H., YN2, USN.

SIR: In reading the article of BMC R.T.S. on suggestions on uniform changes I became irked at the thought of even thinking about a single-breasted suit of officers' and chiefs' blues. I suggest that if R.T.S. has trouble with the heat from the over flap of extra material, maybe a reduction in weight would help. If I'm hitting a sore spot, I'm sorry.

The average CPO after he has been in rate a while develops the spare tire —riding a bar stool at the CPO club is not enough activity to keep this down.

As for the markings on the uniform, the more colorful they are the better. When Navymen get away from the coast they get away from their uniform too. When you get away from the two coasts and other Navy towns, the majority of the civilian populace don't even know a CPO when they see one. Instead of a uniform change of any kind I would suggest doing away with civilian clothing for Navymen while on liberty and leave.

I believe that a man, after serving 12 years, would be proud to wear his uniform all the time instead of just on board during working hours. The red and gold hashmarks add color to the uniform and would look nice on *both* sleeves if it weren't for the expense.

As for griping about uniforms, why not do away with the CPO whites since they do resemble just what has been said about them many times—an ice cream vendor's uniform. Not only that, but for as little as they are worn they take up a lot of valuable locker space.

In 17 years' service I have still to wear them ashore. My whites have been used for inspections only. It is my personal opinion that this particular uniform is spare gear and thousands of CPOs would be more than happy to see it go. As for being cool, the tropical worsted khakis being made today are just as cool or cooler. I guess tradition will win out though.—D.A.A., EMC(SS), USN.

• *And all we asked for were comments on the letter from R.T.S. on his suggestion about hashmarks.*

The Navy is always glad to receive constructive suggestions for changing uniforms and is not averse to changing the uniform whenever a change is desirable and warranted. On the other hand, the Navy has always been conservative in matters of uniform and leans toward evolution rather than revolution.

You can understand the reasons for this if you consider the number of people involved and the supply problems connected with outfitting every man with a complete set of clothing. For example, considering the present stock level of the undress white uniform, it would be uneconomical to change it radically at this time. The Navy is investigating the possibilities of adopting a wash-and-wear type synthetic fabric for use in the whites.

One of the primary reasons for the different uniform for Navymen below CPO is lack of storage space afloat.

Remember also, there have been many proposals and suggestions for changing the enlisted man's uniform over the past 15 years but the major reaction—by the men in the Fleet—continues in favor of a "no change."

In regard to the above letter from D.A.A., EMC(SS), the comments about the Navy uniform are quite pertinent and are appreciated by those in the Bureau who review recommendations concerning uniforms. About the only thing we can suggest is submit your views officially on CPO whites.—ED.

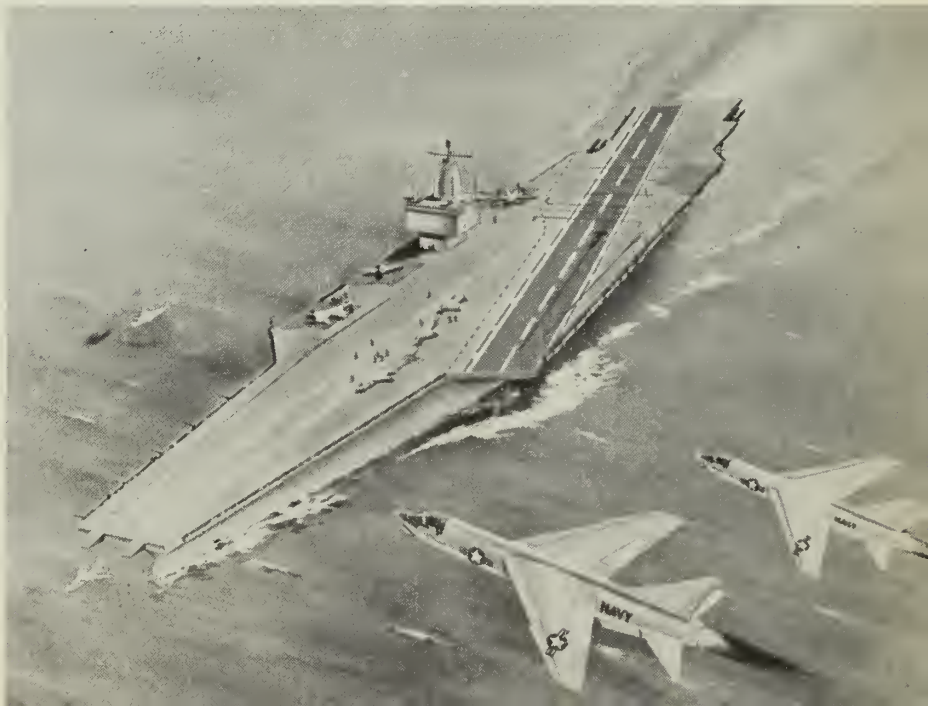
Harry Lee, *Ex-Navy*

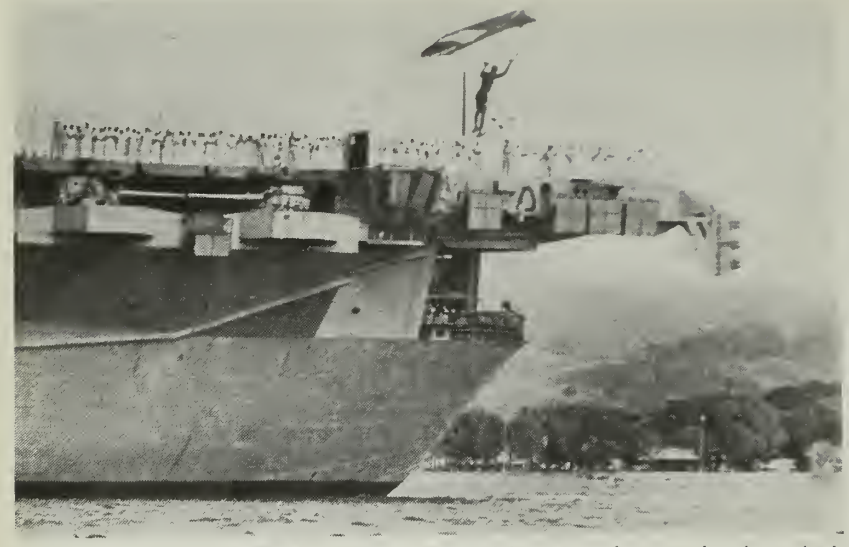
SIR: Your history of USS *Harry Lee* (APA 10), which appeared in the December issue, ended with her being decommissioned on 9 May 1946. Although this was the end of her Navy career, it was not the end of her active life.

Some time after she was decommissioned, she was sold to Turkey and was operated in the Mediterranean by that country's merchant marine. Although I haven't seen her for some time, she may still be in use today.—CAPT E. B. Ellis, USNR.

• *Thanks for the added bit of information that brings the history of* Harry Lee *almost up to date.*—ED.

ATOM BURNER—Navy's first nuclear-powered aircraft carrier *Enterprise*, CVA(N) 65, is shown in artist's drawing. She is due for launching in June '60.





HIGH AS A KITE—Water skier using kite for lift seems about to land on deck of *USS Bennington* (CVA 20) during USO show held for crew in Subic Bay.

Anyone Mention CO Order Book?

SIR: In your comments following the letters on pages 29 and 30 of the November issue, you point up a problem by asking, "What does a personnel man do, anyway?"

That same question could apply to any rating and you would be correct in stating that a man might go through a 20-year career and still not encounter all the details of his particular rating.

However, you didn't make the point that when a man goes to a new command, where he may encounter details concerning his rating with which he may not previously have been familiar, it is the responsibility of his seniors—from his skipper on down—to break him in properly. In the case of the personnel man M. D. H., (August 1958, p. 25), either his executive officer or personnel officer was indicted for this omission simply because M. D. H. found it necessary to write the letter. A command is not instructing its personnel properly if an individual feels the need to write all the way to headquarters for the answer to a question as simple as the one which appeared.

In addition, I question your implication that use of a CO Order Book wolud be of primary concern to a DK. This definitely was not so in my own experience as exec and commanding officer of small LSTs that had no disbursing officer or disbursing clerk.

The process of assigning a CO Order Number is of primary concern to the personnel officer and the men who work for him. They handle the many administrative chores for the CO in keeping personnel records up to date, only one of which is the assignment of CO Order Numbers to those service record pages and other forms which require such numbers.—D. L. Cooke, LT, USN.

SIR: I was amused by your comments in the November issue concerning the CO's Order Book. However, your final comment on page 30 was way out in left field. You wrote in part: "Without looking it up, it seems to us that since the CO Order Book is primarily concerned with disbursing, it should be of interest to a DK. What has a personnel man to do with disbursing?" I am sure your comment was meant to be facetious, for I am also sure that you are familiar with BuPers Inst. 1085.44 of 17 Jan 1958 on the subject of maintenance and accuracy of service records.

The Navy Error Detection and Reduction Program was established in 1955. Included in this program is the procedure for on-site examination of military pay records by Navy Regional Accounts Offices.

This procedure is more than an audit of pay records and disbursing offices in that the examiners include a look-see at the related records maintained by personnel offices. Without going into details of such an examination, let me say that the results have been startling and revealing.

Statistics published by NavCompt based on on-site examination of 22,597 pay records at 140 stations during the period 1 Jul-31 Dec 1957 show that of the 1866 errors, 351 were the responsibility of disbursing offices, and 1451 were caused by personnel offices. During the period 1 Jan-30 Jun 1958, on-site examinations of 23,427 pay records at 146 stations discovered 2077 errors of which 352 were caused by disbursing and 1660 were the responsibility of personnel offices.

It is interesting to note that the errors traced back to personnel average about two underpayments to each overpayment. Many of these underpayments are caused by failure of the personnel office to prepare and send to disbursing an appropriate CO Order.

"What has a personnel man to do with disbursing?" I would say that the next time your pay is short, the chances are about nine to one that some personnel man was responsible, and if your pay is right a personnel man can take a share of the credit.—G. W. Netts, CDR, SC, USN.

• *We're beginning to get the full picture. Thanks.*—ED.

Thanks All Around

SIR: As a result of a story in ALL HANDS about the MSTSO-supported Mi Ae Orphange in Pusan, Korea, generous contributions of rice and clothing have been received. The children are most grateful.

Thank you.—F. D. Fane, CDR, USNR, MSTS Office, Pusan.

• *Thanks, yourself—besides being a worthy cause, it made a good story.*—ED.

Personnel Man Speaks Up

SIR: I have been a reader of ALL HANDS since its birth and have never seen fit to question any of the remarks the editorial staff has made about letters to the editor. But—I can contain myself no longer!

I refer to your closing statement about the group of letters in the November 1958 issue headed "Comments on the CO's Order Book Stir Up Hornet's Nest"—and in particular—to the question in the final paragraph, "What does a personnel man do, anyway?"

Boy! If that doesn't have all the personnel men in the Navy after your scalps, then the PNs are not worth their salt. If you, who are in the Bureau, don't know, all of us, who beat our brains out and grow ulcers keeping the records and taking care of all sorts of details, might just as well burn the *BuPers Manual* and PAMI Instructions, pick up our typewriters and jump over the side.

For your edification, here are a *few* of the *major* and *indispensable* items which would be hard to come by if the personnel men failed to carry out their duties:

PAY—Without orders to Disbursing Officers prepared by the PNs (with numbers recorded in the CO's Order Book) there would be none.

CHOW—Without a ration count tallied by personnel men and furnished to commissary officers to show how many men must be fed, there would be none.

PERSONNEL DIARIES—Without these records, prepared by PNs, there would be no use for:

BUPERS—Which needs a constant flow of information prepared by per-

sonnel men. Without this, you might all close up shop.

PERSONNEL—If they aren't important enough to keep records on, who needs them?

THE U. S. NAVY—Without personnel there wouldn't be one.

So, you wanted to know what a personnel man does, huh? If the foregoing doesn't make you hide your head, the following should:

The personnel man deals in the most valuable commodity in the world—manpower. And, he is a technician in one of the most modern of business sciences—personnel management.

Oh, yes—you and the rest of the diehards will say, "The yeoman used to do all that."

Sure he did! He used to perform SK duties too, and the SK used to perform DK duties, and the DK used to—on and on, ad infinitum.

I think I'll retire—H. I. Hanna, CHSCLK, W-4, USN.

SIR: I didn't mind the criticism about a personnel man not knowing what a CO Order Book is, since it's quite possible, as you say, for a PN to go through his entire naval career without ever seeing one. The thing that got me about all this was that you, in your summary of all those letters, ended up reading off the personnel man.

If you will take a good look at all the letters you published, you will see they were all submitted by yeomen, and not personnel men.

And, so far as old salty goes—he's the one who said, "Among the old timers, before there were any personnel men . . . . ."—we would like to remind him that a lot of us PNs were once yeomen.

If I were in the YN's shoes, I wouldn't be so fast to criticize such a small mistake.

DOUBLE HEADER—Two new missile frigates, *USS Coontz* (DLG 9) and *USS King* (DLG 10), stand together while readied for launching in Puget Sound.

I have 15 years plus in the Navy, and nine and one-half of them on board DDs, DEs and CVs. I have seen many yeomen and personnel men—second class and above—who have reported for duty knowing a lot less than our PN2, who wrote the original letter about the CO's Order Book and received all the blasting.

I would also like to inform the yeomen that there is no billet on DEs (our ship is a converted DE) for a PN1 yet you will find throughout the Navy that PNIs are filling this billet for the yeomen.

Advancement in the lower pay grades of our rating is rapid, so it is not unusual for a man to make second without ever being off the same job. I have yet to see any examination for advancement in rating that asked the question, "What is a CO order book?" or, "Who maintains the CO order book"—H. J. James, PN1, USN.

• *Somebody out there doesn't love us.*

In a forthcoming issue, you will find an article which proves that we really do know something about personnel men. If you think we're going to give you more of an answer than that, you're giving us more credit for fearless journalism than we deserve.—ED.

DEs and DERs: Navy's

ONE OF THE MOST important new ship types to come out of World War II was the versatile DE.

Smaller and simpler than a regular destroyer, the DE was mass-produced by wartime shipyards to serve as a convoy escort in place of the full-sized destroyers which were badly needed elsewhere—hence her official name, escort vessel, and her classification in the patrol ship category along with sub-chasers and the like. In spite of the name and classification, however, DE sailors consider themselves destroymen—and rightly so.

Nowadays, DEs and DERs (DEs which have been converted into radar picket ships) have the patrol ship classification practically all to themselves. About the only other ships in that category still active are a mere handful of PCs (173-foot submarine chasers) and PCERSs (180-foot rescue escorts), which are being used in experimental work, or as Reserve training ships. Gone—to the mothball Fleet, foreign navies or the scrap heap—are almost all of the hundreds of PCEs (180-foot escorts), PCSs (136-foot submarine chasers), PFs (patrol escorts), PGMs (motor gunboats), PRs (river gunboats), PYs (yachts) and SCs (110-foot submarine chasers) which were an important part of the Fleet not too many years ago.

Most of them went out of active service soon after World War II, but there were a number of PFs and PCEs (180-foot escorts used as control ships in amphibious operations) which saw action in Korea before they were sidelined.

With DEs the story is different. New classes are being built, and quite a few of the World War II models are still around to carry on the same sort of valuable service they began performing for the Navy during the war.

Altogether, more than 400 wartime DEs were commissioned, and it didn't take them long to prove their worth, not only in convoy work, but also in many other fields. As members of hunter-killer groups they helped the Navy to launch its offensive against enemy submarines in the Atlantic. They served as plane guards for aircraft carriers. They helped to soften up enemy-held beaches for invasion. And, with a deckhouse amidships for troop quarters and the addition of gear for stowing and handling small landing craft, they became high-speed transports (APDs). In short, they made themselves useful in all sorts of situations.

For instance, consider USS *John C. Butler* (DE 339) on 20 May 1945, when kamikaze planes were staging one of their suicide attacks during the Okinawa campaign.

The ship was alone on a screening station off Ie Shima when the alert was called. Shortly, 10 enemy planes had singled her out as a likely target, and the DE found herself in the midst of a fight for life.

Her guns stopped two of the attackers before they could even dive. She got a third, which came down in flames, clipped a radio antenna and crashed nearby. Her fourth victim, already flaming, was blown up as it tried to bank into the ship. Then, she downed a fifth plane which crashed almost on top of her. It sheared off some of the DE's radar antennas and showered the ship with water and bits of wreckage when it crashed. A sixth plane retreated, leaving a trail of smoke behind it, and the rest were driven off by Marine Corps planes.

When the excitement had died down, the tough little ship discovered that she had scored five kills in just 13 minutes and that she had come through the attack without receiving any serious damage.

One of the best-known DE exploits of the war was that of USS *Pillsbury* (now DER 133), whose boarding party captured the German submarine *U-505* off French West Africa on 4 Jun 1944. This was the Navy's first successful boarding and capture of an enemy man-of-war on the high seas since 1815. After her adventure, *Pillsbury* had the honor (and the chore) of towing the prize more than 2500 miles back to a stateside port.

USS John Willis (DE 1027)

The World War II DEs could be sorted into two main categories—one short-hulled (289 feet) and the other long-hulled (306-feet).

The short-hulled DEs came from what was originally a British design. They had a standard displacement of about 1150 tons, diesel electric propulsion, a top speed of around 20 knots, a range in the neighborhood of 6600 miles, no torpedo tubes and three 3-inch/50 dual-purpose guns.

In the long-hulled category, there were variations in power plants and design but the ships still had some things in common. In one assortment of them standard displacement was between 1200 and 1450 tons. Their machinery was either diesel, diesel electric or turbo-electric. They could do about 21 knots, and they had a range of around 6000 miles. These ships were equipped with three 21-inch torpedo tubes and three 3-inch/50 dual-purpose guns.

Ships in a second long-hulled group displaced about 1275 tons (standard), had geared steam turbines, could do around 24 knots and had a range of some 6000 miles. They packed a considerable punch in their three 21-inch torpedo tubes and two 5-inch/38 dual-purpose guns.

Ships in both the long- and short-hulled categories carried several 40mm and 20mm machine guns, plus eight or nine single and one multiple hedgehog.

Bantamweight Champs

The short-hulled DEs were sold out of the Navy after the war, and a good many of the long-hulled ones went into mothballs, to stand by until they were needed again. That time wasn't long in coming.

In 1950 the Navy began to bring DEs out of their peaceful nesting places for conversion to the floating radar sets called DERs which are now outposts of our Continental Air Defense system.

While undergoing conversion, the ships' combat information centers were enlarged to handle increased information from air-search, height-finder and surface-search radar. More communications equipment was installed to handle the voice radio and ship-to-shore communications so necessary to an effective warning system.

Much of this gear was put into spaces which had been used for messing and berthing when the ships were strictly DEs. This meant that the center portion of the main deck had to be enclosed and a superstructure added to provide new spaces for these purposes.

The modifications added to the escort's displacement, bringing the DER's weight almost up to that of a pre-World War II destroyer. Prefabricated aluminum was used in all alterations in an effort to keep the added top-weight to a minimum. Even the tripod mast for the radar antennas, and the huge deckhouse, were constructed of aluminum. Yet, more than 60 tons of pig iron had to be placed in the bilges and voids as ballast to offset the added topside weight.

The enlarged CIC and added electronic and communications gear weren't the only improvements. To make the ships more livable, there were such welcome items as: soft, eye-pleasing colors for compartments; fluorescent lighting; tiled decks; air conditioning; and individual bunk lights.

USS Snowden (DE 246)

About the same time the DER program was getting into full swing, the Navy began placing orders for a batch of ships which were really something brand new in the DE line—ships like USS *Dealey* (DE 1006) and *Courtney* (DE 1021). Since 1954, 13 of these ships have been commissioned. They have attracted considerable attention in naval circles.

Their all-aluminum superstructure saves a good deal of weight. They have a low silhouette which makes it difficult for submarines to detect them visually, and their new hull design permits high-speed running under sea conditions which would be a considerable handicap to the DEs of World War II vintage. Their detection devices and armament are the latest in defensive and offensive ASW gear. Their habitability items include modern lighting, air conditioning in all vital control spaces and many other conveniences for the crew.

The *Dealey* and *Courtney* class DEs are both powered by steam turbines which develop 20,000 shaft horsepower. Their single screws move them along at a rated speed of 25 knots.

Until the *Dealey* and *Courtney* classes came along, DEs had been considered too slow to serve in modern hunter-killer groups or the ASW defenses of fast carrier task forces. Now, however, the modern destroyer escorts are able to handle those jobs so well that they are serving regular tours with the Sixth Fleet in the Mediterranean for the first time since immediately after World War II.

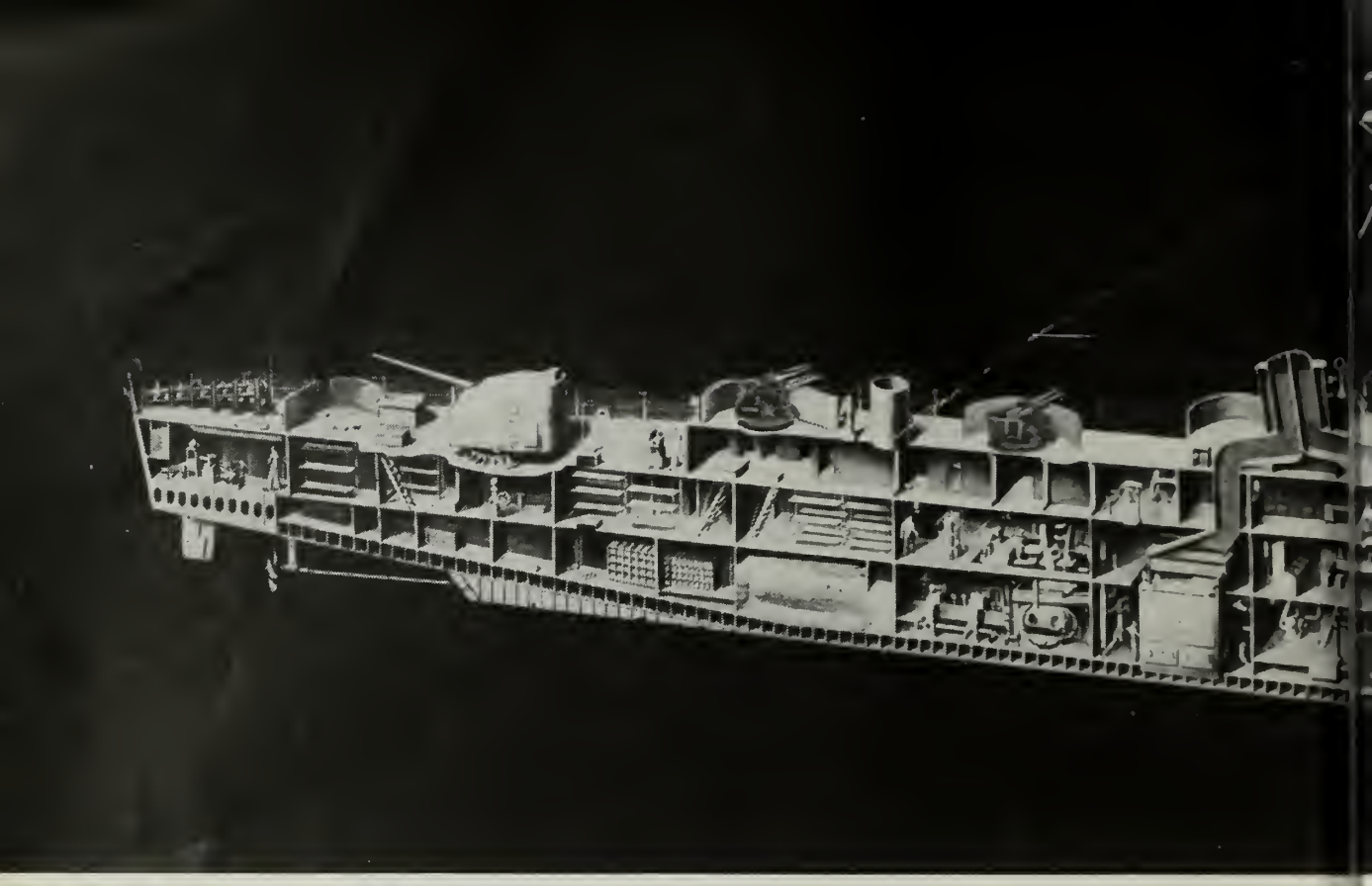
In addition to the *Dealey* and *Courtney* class DEs, another brand new class in the DE picture is that of USS *Claud Jones* (DE 1033), which was commissioned in February of this year. *Claud Jones* is the lead ship of a new four-ship series of diesel-driven antisubmarine escort vessels. As the first of her class, she has such new features as a unique upper deck arrangement, aluminum masts and deckhouse and the latest in electronic detection equipment. All of the ships in the series will be fitted out to serve as flagships for division commanders.

Though their ships may be more up-to-date, the men who sail the latest DEs still have the same "old-fashioned" esprit de corps which helped to make the World War II DEs a success. A good example of that spirit is a poem which USS *Joseph K. Taussig* wrote to ComSixth Flt when she was preparing to return to Newport, R. I., after her first tour in the Med.

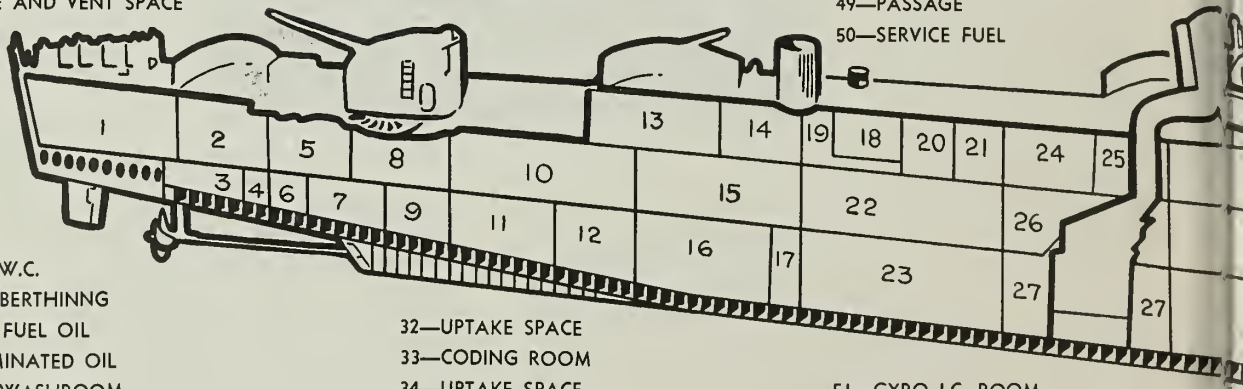
The DEs have earned quite a name for themselves everywhere you meet the U.S. Fleet.

From the peaceful shores of Southern France,
Where bikinis held our lingering glance;
We sail for home and those so dear,
Only to return, perhaps next year.
Though our task was big and our numbers few,
We gave a boost to the words, 'can do';
We did our job in seaman style,
We've proved our worth—we're versatile.
From "Send the destroyers," the slogan will read,
"Send us more of that newer breed—
Of Destroyers referred to as DE,
Like Dealey, Lester *and* JKT."

—Jerry Wolff.



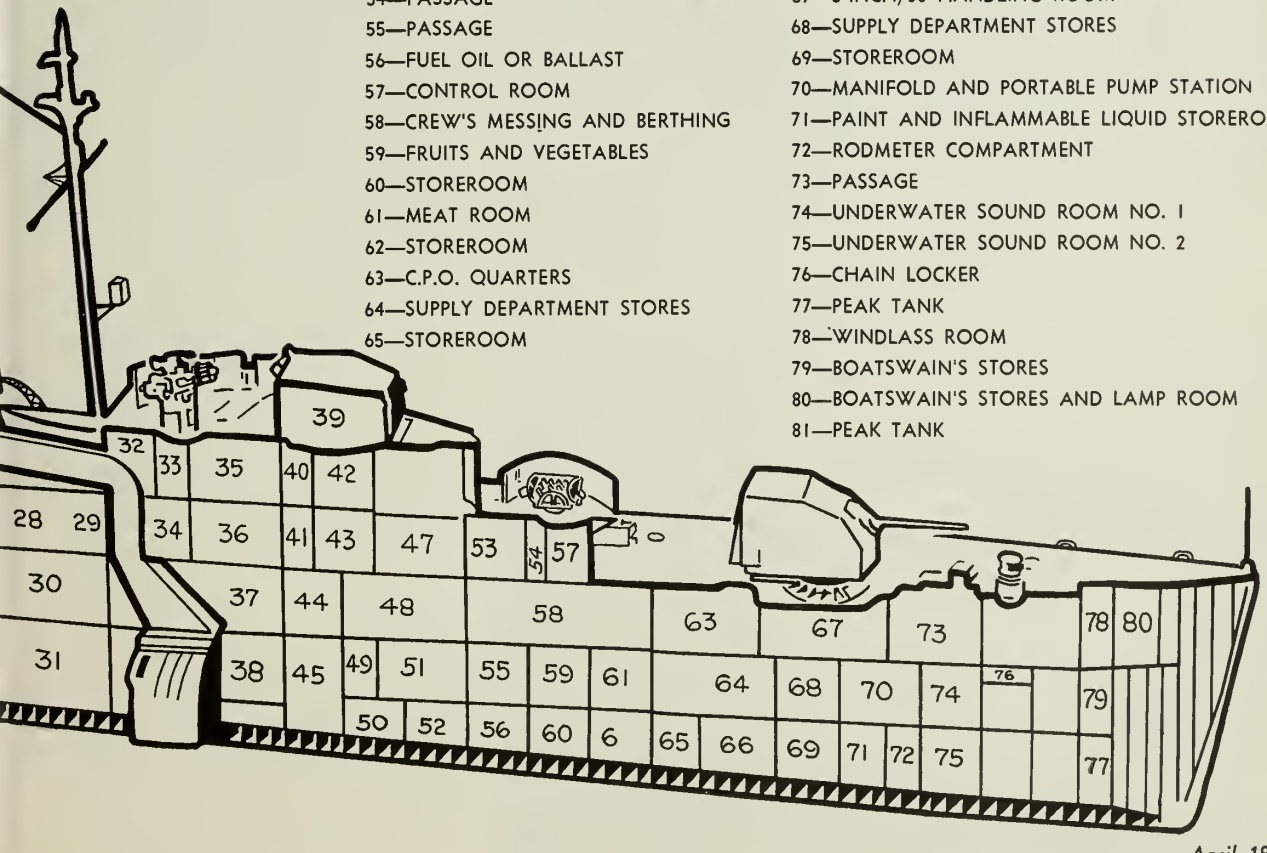
1—STEERING GEAR ROOM
2—CREW'S BERTHING
3—40MM AMMUNITION MAGAZINE
4—PASSAGE
5—CREW'S BERTHING
6—DEPTH CHARGE PISTOL STOWAGE
7—STOREROOM
8—AMMUNITION HANDLING ROOM
9—STOREROOM
10—CREW'S BERTHING
11—STOREROOM
12—40MM AMMUNITION
13—PASSAGE AND VENT SPACE
14—CREW'S W.C.
15—CREW'S BERTHINNG
16—SERVICE FUEL OIL
17—CONTAMINATED OIL
18—CREW'S WASHROOM
19—PASSAGE
20—PASSAGE
21—PASSAGE
22—AFT ENGINEROOM
23—AFT ENGINEROOM
24—GENERAL WORKSHOP
25—UPTAKE SPACE
26—AFT FIREROOM
27—AFT FIREROOM
28—SHIP'S ENGINEER'S OFFICE
29—VENT
30—FORWARD ENGINEROOM
31—FORWARD ENGINEROOM
32—UPTAKE SPACE
33—CODING ROOM
34—UPTAKE SPACE
35—RADIO ROOM
36—GALLEY
37—FORWARD FIREROOM
38—FORWARD FIREROOM
39—PILOT HOUSE
40—PASSAGE
41—RIFLE AND PISTOL LOCKER
42—CAPTAIN'S BATH
43—PANTRY
44—SCULLERY
45—SERVICE FUEL OIL
47—WARDROOM MESSROOM
48—CREW'S MESSING AND BERTHING
49—PASSAGE
50—SERVICE FUEL
51—GYRO I.C. ROOM
52—FUEL OIL OR BALLAST



Prepared by ALL HANDS Magazine

Patrol Ship
TYPICAL DE – Escort Vessel

53—WARDROOM STATEROOM
54—PASSAGE
55—PASSAGE
56—FUEL OIL OR BALLAST
57—CONTROL ROOM
58—CREW'S MESSING AND BERTHING
59—FRUITS AND VEGETABLES
60—STOREROOM
61—MEAT ROOM
62—STOREROOM
63—C.P.O. QUARTERS
64—SUPPLY DEPARTMENT STORES
65—STOREROOM
66—STOREROOM
67—5-INCH/38 HANDLING ROOM
68—SUPPLY DEPARTMENT STORES
69—STOREROOM
70—MANIFOLD AND PORTABLE PUMP STATION
71—PAINT AND INFLAMMABLE LIQUID STOREROOM
72—RODMETER COMPARTMENT
73—PASSAGE
74—UNDERWATER SOUND ROOM NO. 1
75—UNDERWATER SOUND ROOM NO. 2
76—CHAIN LOCKER
77—PEAK TANK
78—WINDLASS ROOM
79—BOATSWAIN'S STORES
80—BOATSWAIN'S STORES AND LAMP ROOM
81—PEAK TANK



★ ★ ★ ★ TODAY'S NAVY ★ ★ ★ ★

FUN TO COME—Crew members of *USS Mount McKinley* (AGC 7) 'man the rails' with happy thoughts of stateside liberty on return from tour of duty.

Navy Chapel at the South Pole

Early this year the Deep Freeze IV contingent at Scott-Amundsen Station at the geographic South Pole dedicated a new permanent chapel.

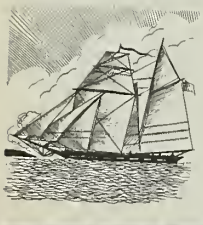
The 16-by-16-foot gabled-roof chapel is 10 and one-half feet high and has a steeple and cross on the front. Inside, at the rear, is a platform one foot high, three feet deep and six feet across, bounded by a one-foot high railing.

An altar is set in the wall behind the platform. A kneel board is located around the rear platform for receiving communion. Behind the altar the wall is of stained mahogany. White canvas, four feet high trimmed with blue cloth, covers the other three walls. Open natural wood rafters make up the ceiling. A simulated window of green corrugated fabric glass with a religious painting, lighted from behind, is located on either side of the entrance.

With no chaplain available in their complete isolation, the 17 men take turns each Sunday to give sermons on their own faith. Each of the major religions, Protestanism, Catholicism, Judaism, and Buddhism, is represented by at least one member of the group.

A sign has been placed over the entrance, "The Chapel of Our Faith, South Pole. Built by the men of Deep Freeze IV, January, 1959."

YESTERDAY'S NAVY



On 2 Apr 1781 USS *Alliance* captured the British privateers *Mars* and *Minerva* off the coast of France. On 3 Apr 1862 a landing party from USS *Mercedita* and *Sagamore* captured the town of Apalachicola, Fla. On 6 Apr 1917 the U.S. officially entered World War I. On 16 Apr 1945 USS *Frost* (DE 144) and *Stanton* (DE 247) sank two German subs in the North Atlantic. On 18 Apr 1847 an expeditionary force of almost 1500 Navymen and Marines under COMO Matthew C. Perry captured three forts at Tuxpan, Mexico, seizing a considerable quantity of ordnance and other stores.

Plans for *Seamaster* Squadron

The *Seamaster* jet seaplane program will be closed when the Navy has received 14 of the big P6Ms from the manufacturer.

The 14-plane total will give the Navy six P6M-1s and eight P6M-2s. The P6M-1s will be used for training and other purposes. The later model planes will be used to equip an operating squadron.

With this squadron the Navy will explore the potential of the 600-mile-per hour aircraft for mine-laying, reconnaissance, air refueling and attack against sea and land targets.

The *Seamaster* represents a new concept in naval aviation. It is able to operate from any place where the water is reasonably smooth, it gives high-speed performance at low altitude and it has a very long range.

Originally, the *Seamaster* program called for construction of 24 P6Ms. However, in the light of changing concepts and new developments in naval warfare, the Navy has decided that the lesser number will be enough for its purposes.

More *Marlins* for ASW

The Navy has awarded a $23-million contract for the production of P5M-2 *Marlin* antisubmarine seaplanes equipped with a new submarine detection system.

These P5Ms—with their new far reaching and highly sensitive detection systems—will allow detection of enemy subs over far greater ranges than is at present possible in existing Navy patrol planes.

The gull-winged twin-engine *Marlins* will be capable of conducting a 12-hour patrol while on ASW duty. They can be deployed to waterbase sites with mobile seaplane tenders providing support.

Earlier models of the P5M-2 have been in Fleet service since 1954. They were used to develop techniques of refueling seaplanes in secret rendezvous with submarines. These tests proved the feasibility of providing present and future seaplanes with this unique means of refueling on far flung combat missions.

The P5M-2 is about 100 feet long. Its long-hull afterbody provides increased control during rough-water landings and take-offs. Hydroflaps are installed on both sides of the hull afterbody which act as a brake when opened together, or as a rudder when operated separately.

These new ASW planes have a wing span of 118 feet. They weigh about 33 tons and have a range of 2500 nautical miles. They will carry a crew of ten.

Working at a New Stand

Ships of Cruiser-Destroyer Force, Pacific Fleet, deployed to the Western Pacific, are now being serviced by a new floating service station. The service station is USS *Dixie* (AD 14) which recently relieved USS *Piedmont* (AD 17) in the Far East. This is *Dixie's* sixth tour of duty in the Far East since the beginning of the Korean conflict.

Dixie crewmen believe and try to live up to the ship's motto, "What the *Dixie* makes, makes the *Dixie*." During the recent crisis in Lebanon, for example, a destroyer division was readied for sea in 24 hours.

No job seems to stagger *Dixie* repairmen. Although most of the job orders (usually about 100) submitted during a DD's two-week tender availability are routine, *Dixie* occasionally is handed a real tough job. Last October, for example, *Dixie's* divers lifted and tightened a rudder on the destroyer USS *Rogers* (DDR 876). The job was accomplished in five days.

The primary function of *Dixie* is to overhaul and replenish ships assigned to her, but while alongside, destroyer personnel often take advantage of many lesser services the big ship has to offer. These include small stores, a soda fountain, dental and medical facilities, a library, chaplain's office, postal facilities, watch repair shop, cobbler shop, liberty boats, and some other everyday pleasures not always available in destroyers.

More than 75 different shops aboard stock 60,000 items which are valued at one and a half million dollars, give or take a few thousand. The three machine shops and the valve repair shops which keep a destroyer's engineering plants in good condition are busiest. Blacksmith, canvas, sheet metal, welding, boiler, electrical, electronic, and ordnance shops also turn to.

Many of the shops do work not indicated in the title. The canvas shop, for instance, concerned itself in the old days with rigging canvas for sailing ships. Today *Dixie* doesn't make many sails, but the shop does keep busy working with upholstery, gun covers and other heavy materials.

In her last assignment *Dixie* worked primarily with destroyers. Overseas, however, she will service almost any type ship that comes alongside. She may even feed and berth transients as receiving ships once did.

Dixie will soon be 20 years old. She was built in 1939 and commissioned in April 1940, the first tender of her class. She served in the South Pacific during World War II and during the Korean conflict bombarded the North Korean coast with her five-inch guns.

Non-Stop to the Antarctic

The icebreaker USS *Edisto* (AGB 2) steamed 9335 miles non-stop—from Norfolk, Va., to Ellsworth Station, Antarctica — without refueling or taking on provisions. This was the first time in Deep Freeze history that such a feat had been accomplished.

Edisto departed from Norfolk in mid-December and arrived at Ellsworth Station on 1 February. She was delayed 10 days by a heavy icepack just 500 miles short of her destination.

The icebreaker remained at Ellsworth long enough to secure IGY activities and turn the station over to the Argentine government. When this task was completed she evacuated U. S. naval and scientific personnel who spent the last year there as observers in the IGY program. The wintering-over party was taken to Buenos Aires, Argentina, where they were flown back to the U. S.

Buenos Aires was the first port of call for the icebreaker after 60 days at sea during which she traveled over 12,000 miles in two stormy oceans.

SHIP'S MAST—Crane at Pearl Harbor Naval Shipyard moves new mast into position on *USS Cogswell* (DD 651).

PETROL PUMPER—USS *Chukawan* (AO 100) made a pretty picture as she was photographed making her way through water of sunny Mediterranean Sea.

SIDE BY SIDE—*USS Kawishiwi* (AO 146) pipes load of NSFO to *USS Fessenden* (DER 142) while in Hawaiian waters.

Scrubbers for Subs

The Navy has ordered 21 "scrubbers" to be used in atomic submarines.

However, this doesn't mean that automation has come to compartment cleaning.

The scrubbers are devices which remove carbon dioxide from the air through a standard industrial process. In confined spaces they prevent suffocation from rebreathing exhaled carbon dioxide.

Twelve of the scrubbers are intended for use in *Polaris*-launching nuclear submarines now being built. The first four of these units are scheduled for delivery in June 1959, for installation in two new *Polaris* subs. Two units are installed in each of the nuclear craft.

All of the atomic submarines now in service already have scrubbers. They helped make it possible for USS *Seawolf,* SS(N) 575, to remain submerged for 60 days and for USS *Nautilus,* SS(N) 571, and *Skate,* SS(N) 578, to make their trips under the North Pole.

The compact stainless steel units are each capable of removing 15 pounds of carbon dioxide from the air per hour. This is enough to meet the needs of about 100 men. When the equipment is in operation, the air inside the sub passes through an absorber column where an absorbent removes carbon dioxide. In compressed form it is then expelled into the sea where it dissolves without letting any telltale bubbles escape to the surface. Meanwhile, the absorbent is reactivated in a separate vessel so that it can be used again.

Sailing LST

Shades of John Paul Jones! The days of sailing ships are not over.

USS *Rice County* (LST 1089), operating in PHIBPAC, made eyes pop at the Naval Station, San Diego, when she came into port under sail just one day late of her ETA.

The ship, returning from duty in the Western Pacific, was en route home when one of her engines failed. With no spare parts aboard, she tried to continue with only one engine. But the ship had a tendency to veer off and her speed dropped to six and one-half knots. With 1000 miles left to go, chances were that her homecoming would be delayed.

LCDR M. A. Smith, commanding officer, was determined that would not happen. He ordered a canvas hatch cover rigged as a sail. That was the answer. The sail held the ship straight and added one knot to her speed.

When Captain Smith arrived in port, he said, "We had favoring winds and seas on the quarter all the way. And I had a hundred men behind me to get the ship here."

Sounds like something that a skipper of any sailing ship might say, doesn't it? Or, it's a bit reminiscent of something that happened to the S.S. *Inchcliffe Castle.*

Survival Lesson

Three sailors from PHIBLANT's USS *Hermitage* (LSD 34) were recently stranded in an open boat in 15-degree weather for nearly nine hours near Norfolk, Va. Their experience demonstrates one of the major rules of safety: they kept their heads. This enabled them to attract the attention of rescuers and withstand the cold until help came.

The ordeal started at 10:30 p.m. when the three men started on a routine trip from their ship to pier seven at the Naval Station in a 40-foot boat. Donato F. Maurino, SA, was the boat coxswain; Walter D. Jordan, SN, was engineer, and Glenn D. Riddle, SA, was the bowhook.

As they approached rocky breakers the boat's engine quit and the boat started to drift. The men continued to work on the motor as they drifted. "We got the engine started quite a few times, but it conked out each time," Maurino said. "After we passed the bridge (the Hampton Roads Bridge-Tunnel), we dropped anchor and waited," he added.

The only thing in the boat to signal with was the lifejackets. The three men tore up some of the extra lifejackets, saturated them with diesel fuel, set them afire, and waved them around feverishly on the end of the boat hook. "The Navy's about five lifejackets short now," Jordan said.

All Navy ships in the area had been on the lookout for the three men since 11:45 p.m. At 2:15 a.m.

a bridge-tunnel guard saw the boat and notified the Coast Guard. But nature and circumstances kept them stranded longer. The first patrol boat that started for the men developed rudder trouble. A second CG boat was forced to give up the rescue when it ran into heavy icing conditions near the naval base.

The men kept up their spirits during the cold night. "We just moved around to keep from getting cold," Jordan said, "but Riddle just seemed to keep going to sleep. We would call and yell at each other to keep from going to sleep."

At 7:00 a.m. a helicopter from NAS Norfolk was able to pick up the three. Jordan and Maurino were taken to the Dispensary at the Naval Air Station where they were treated for exposure and exhaustion. Riddle was taken to the Portsmouth Naval Hospital and treated for frostbite.

Coming in for a Landing

One of the newest additions to the Atlantic Fleet's Amphibious Force —PHIBRON Ten—is engaged in a series of three training exercises which began in January and will extend until June.

These operations, dubbed *Brigadelex* (Brigade Landing Exercise), provide the newly formed amphibious squadron with training in the tactics and techniques of amphibious assault by troop-carrying helicopters. Each of the three exercises will be concluded with actual assault landings at Vieques, Puerto Rico.

PHIBRON Ten is built around the interim amphibious assault ship USS *Boxer* (LPH-4). Other units of the squadron include four of the newest, fast LSDs.

The landing force during these exercises is made up from units of the 8th Provisional Marine Brigade. Tactical Air Control is provided by TACRON 22. These forces are being supported by underwater demolition swimmers.

Leading the PAC

A MIDPAC-WESTPAC Leadership Field Team has been formed under COMSERVPAC to provide Field Team services to commands in the Pearl Harbor, Western Pacific and Far East areas. An extended visit to the Western Pacific and Far East began 30 January. It is anticipated that such visits will be made on a semi-annual basis.

The mission of the team is to assist the various commanders and individual commands in their leadership training programs.

The itinerary to be followed by the team will be coordinated by COMSERVPAC and furnished to interested commands. Those commands interested and requesting the services of the MIDPAC-WESTPAC team should inform COMSERVPAC with an information air mail copy to the Chief of Naval Personnel (Pers 12). Where team services are desired in the Pearl Harbor area, requests should be made to COMSERVPAC without reference to the Chief of Naval Personnel.

Navy Missile Plans

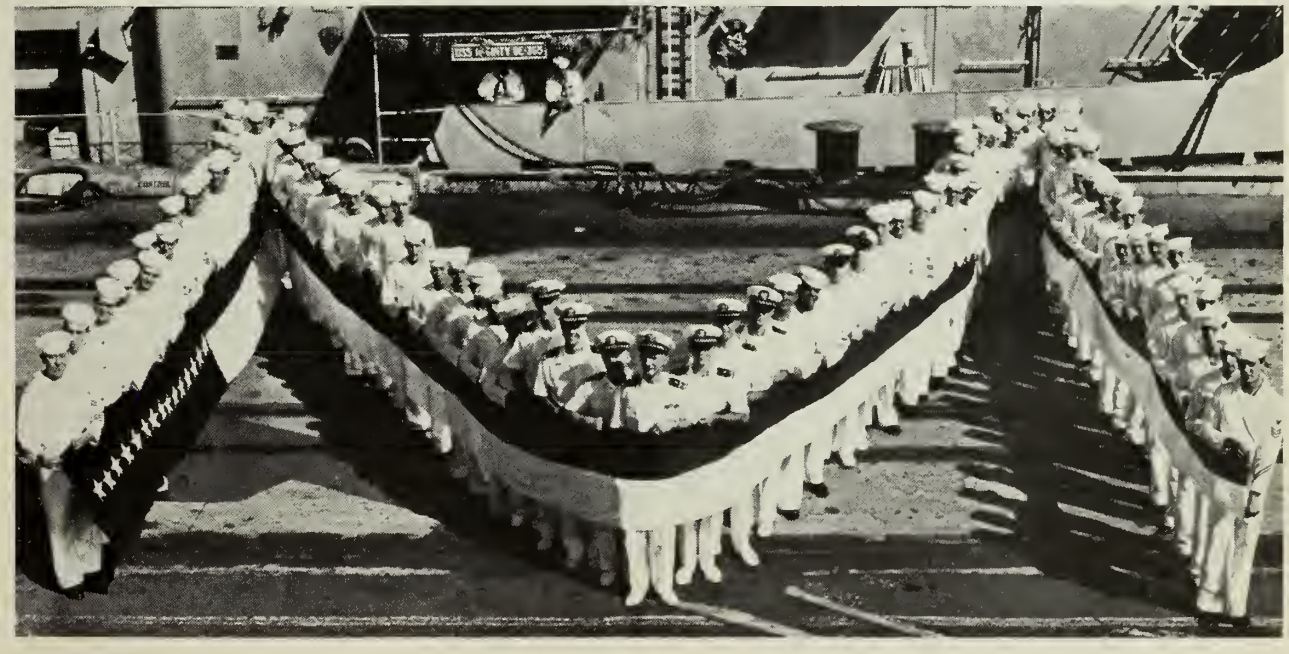
The Navy has cancelled its *Regulus II* missile program to pave the way for more advanced missiles. As a result, the Navy will apply the recoverable funds for newer weapon systems or ship and aircraft construction programs.

Regulus II could be armed with a nuclear warhead and was capable of hitting targets with precision accuracy more than 1000 nautical miles from its launching site. It was a jet-powered missile designed to be fired from submarines, surface ships or mobile land-launching platforms.

Although Regulus II is considered to be one of the most successful air-breathing missiles developed, the program is being terminated to provide the best balance in over-all Navy weapons systems within the resources available at present and for the foreseeable future.

In the light of changing technology in the missile field it is apparent that the *Polaris* Fleet Ballistic Missile now under development has greater growth potential in over-all military effectiveness than the *Regulus* air-breathing missile. By halting the *Regulus* program, the Navy plans to move as rapidly as possible with *Polaris* and other more advanced systems which go beyond the capabilities of *Regulus II*.

HEADED HOME—Crew of *USS McGinty* (DE 365) hold homeward Bound pennant as ship prepares to leave Pearl.



SIDELINE STRATEGY

NAVYMEN who are underwater enthusiasts and students of the fine art of boxing have probably heard of "The Fighting Frogman."

This title belongs to Richard Allen, BM1, USN, who is an instructor at the Underwater Demolition Training School, U.S. Naval Amphibious Base, Coronado, Calif. If you read the story about frogmen in the March issue, you would know that UDT men must be in tip-top condition and tough. And that's just what the "Fighting Frogman" is.

This slugging heavyweight won the Golden Gloves lightweight crown for the past three years. In 1957 he copped the title with an injured hand.

Allen currently heads PHIBPAC's four-man boxing team and is hailed by his coach, veteran ring mentor Nick Milisalvich, BM1, USN—who has trained several other Golden Glove, AAU, All-Navy and All-Service champs—"as the most outstanding of his charges, past or present."

The Fighting Frogman is a career Navyman and a devoted family man. He has three daughters. Because of his family obligations Allen has no desire of becoming a professional boxer, although he has been approached several times on the matter. In regard to this, Allen says, "I consider a naval career as the best thing in the world for me and my family. Besides, I love UDT."

Allen is known in Southern California boxing circles as the only fighter in that area who brings his own cheering section to the fight with him. Most of his fellow PHIBPAC frogmen turn out every time he goes into action and cheer him on to victory.

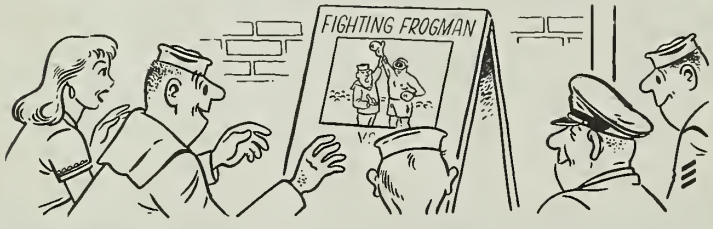
And that they did, as he went on to win San Diego's 1959 AAU heavyweight title. But you can't win 'em all, and Allen's luck ran out on Friday the 13th when he lost his light heavyweight title, a crown he held for four years, to a Marine during the 11th Naval District Boxing Championships.

* * *

When it comes to golf, Navymen at NAS Barbers Point are determined to establish some sort of a record —even without shooting any record-shattering scores.

During a recent Golf Field Day, the Airdale golfers had an all-time record turn-out when the largest field of Navy golfers converged on a single golf course in the Hawaiian Islands. One hundred and forty-four amateurs, from seaman to admiral, shucked uniforms and teamed into 36 foursomes for the contest.

Individual honors of the meet went to LCDR Frank Mihalek, USN, of NAS Barbers Point, and Fred Swope, AMCAP, USN, of VU-1, who each fired a 73. Copping the individual low net honors was Ken Reynolds, YN1, USN, of COMBARPAC, who blasted 89-24-65 . . . HGB, JOC.



AAU Boxers Go All-Navy

Navy and Marine Corps boxers turned San Diego's 1959 AAU Boxing Championship into an "All-Navy" tournament as they captured nine out of the 10 final events.

The three Navy and six Marine fistic stars had their hands raised in victory after working their way through the preliminary and semi-finals which saw the card of 116 narrowed down to the 20 finalists.

The Marines proved to be the mighty mites of the tournament by capturing the fly, bantam, feather, light, light welter and welterweight crowns. In so doing, the Marine Corps Recruit Depot won its second straight team championship in the big San Diego meet.

Navy battlers found the range as the weight classes got heavier. Thell Torrance from uss *Rochester* (CA 124) scored a major upset in decisioning popular Teddy Shores from MCRD for the light middleweight title. His victory, however, was no fluke as shown by his earlier success in knocking out the two opponents he faced en route to the finals.

Solomon Johnson, SH2, USN, demonstrated the class that won him the All-Navy crown last year by outpointing his opponent for the 178-pound title (light heavyweight) after scoring two TKOs in the prelims.

The "fighting frogman" Dick Allen, BM2, wearing the colors of PhibPac's stable, took over the heavyweight throne after a three-year lease on the light-heavy title. He encountered his hardest-hitting foe in the finals when he met 11ND champ Dick Pettigrew of NAAS Brown Field, but he was less prepared to cope with his semifinal adversary, the bear-hugging LT Bill Fackleman, a courageous and competent infighter from Camp Pendleton, whom he narrowly decisioned.

In winning his fourth title in as many years, Allen tied a record set in 1951 by Kirby Seals of NAS North Island, and duplicated by Ken Davis (MCRD and Camp Pendleton). Seals ruled the heavyweight division from 1948 thru '51, while Davis topped the featherweight class from '49 thru '52.

The 1959 AAU tourney drew over 161 entries. This mammoth field was trimmed to size in a 68-bout card that was staged in three rings at the Naval Training Center. The three-ring preliminary card ran for nine hours in disposing of 42 novice, 26

open and one impromptu match between two spectators at ringside who settled their difference of opinion with bare knuckles in a manner outside the Marquis of Queensberry code.

With the AAU light heavyweight title under his belt, Johnson then went on to win the 11ND middleweight title.

Sailor with Skis

Take a look at this record:

- One of the top five water skiers in the nation for the past five years.
- Western Regional Trick and Over-all Water Ski Champion for the past three years.
- Former world record holder in the aquatic ski jump.

These are but a few of the distinctions held by Walter W. Pallack, ADC, USN, of VR-8 based at NAS Moffett Field, Calif.

Chief Pallack became active in water skiing while stationed at Key West, Fla., in 1949. For several years this was simply a form of recreation for the 17-year Navy veteran, but in 1954 he began active competition in this exacting sport.

In his very first tournament at Cypress Gardens, Fla., he won second place in the slalom. Later the same year—still his first in competitive water skiing—Pallack glided off with second place honors in the ski-jumping division at the national championships.

Water skiing tourneys are divided into three events—the slalom, ski jump and trick skiing—and the over-all division which includes points scored in each of the three events.

In 1955, Chief Pallack won the National Trick and Over-all Championships, and, for a time, held the world record in the ski jump. He has never been out of the top three in either the jump or over-all divisions since 1955.

Although he did not compete in the Nationals in 1958, Pallack did enter six local and regional tournaments—winning first prize in the trick and over-all divisions in all six events. Possibly the highlight of his competitive career came at the Regional Championships in 1958, when in all three events, he scored 2957 out of a possible 3000 points.

The 42-year old athlete has over 60 trophies and between 15 to 20 sets of water skis that he has won at various tournaments all over the country the last four years.

PICNIC AT SEA—Cooks prepare deck dinner while at sea in Pacific waters.

Fantail Barbecue—Minus the Mosquitoes

Navymen on board the Pacific Service Force oceanographic survey ship USS *Rehoboth* (AGS 50) regularly feature at sea what is usually only possible for landlubbers—picnics. With no ants.

During the long periods at sea surveying the ocean bottom, the ship features charcoal-broiled steaks, prepared and eaten outside in the ocean air.

Rehoboth's barbecues are held on the ship's fantail instead of in the messhall.

In addition to fresh pineapple, potato salad, baked beans and other side dishes, crew members have cold soda—colas, orangeade and root beer—provided from recreation funds.

The *Rehoboth* barbecue idea was suggested during an Enlisted Recreation Committee meeting. The idea is a winner, according to the 11 officers and 160 whitehats serving on board.

Crewmen fashioned the barbecue pits from discarded 50-gallon oil drums. Charcoal was purchased and brought aboard for the at-sea feasts. The cooks are also pleased. Not once has there been any food left to carry back from the fantail barbecue to the ship's galley.

NO ANTS HERE—After day of surveying ocean, crew of USS *Rehoboth* (AGS 50) line up topside for meal (at sea) of charcoal-broiled steaks.

SERVICESCOPE

Brief news items about other branches of the armed services.

THE U.S. ARMY has developed a new cool-running radio tube that may be the forerunner of tubes which will outlast the equipment in which they are used. It has been described as the first major breakthrough in basic tube design in more than 30 years.

The radically new tube, developed jointly by the U.S. Army Signal Research and Development Laboratory, Fort Monmouth, N. J., and a civilian electric company, glows blue instead of red. It uses less than one-tenth the power of a standard hot cathode tube.

Extremely resistant to heat and atomic radiation, this tube is especially important in military equipment and must be able to withstand exposure to a nuclear blast or the searing heat in a missile nose-cone.

This cold cathode principle should be adaptable to almost all types of electron tubes, including TV screens, giant radar and transmitting tubes, as well as nearly all general-purpose tubes.

Ordinary tubes, ever since their invention, have required a red hot cathode element to generate needed electrons. In the new tube, however, the hot element is replaced by a cold cathode—a tiny nickel cylinder specially coated with porous magnesium oxide (chemically identical to dried milk of magnesia). Instead of heat, a high-voltage field causes the electron flow. This in turn produces the tube's blue glow.

The new tube also springs to life as soon as it is turned on. It doesn't have to warm up. The Army hopes this new development will lead to smaller walkie-talkies, and simpler design of communications gear.

★ ★ ★

DEVELOPMENT of a new airborne radar set now makes it possible to see sharp, bright images even in sunlight. The improvement over present sets is similar to modern TV sets over the one-eyed monsters that used to glare from the corner of a darkened room.

The airborne radar sets now in use require observers to use light-proof hoods during daylight operations. This assures that the image will be bright enough to allow maximum identification of objects. The new set requires no shield. The operator can adjust the cathode ray storage tube to his own preferred brightness.

The new set will soon be substituted for earlier radars used in many USAF troop-cargo and jet tanker aircraft.

ARMY'S HIGH FLOATER—New shallow-draft amphibious resupply ship was developed through Army-Navy efforts.

YUM YUM—Air Force pilot inserts tube of food through face plate for chow during tests for flight into space.

★ ★ ★

AN EMERGENCY MEDICAL PACKET has been devised by the U. S. Army Medical Service for use in a mass casualty situation. Called Phase I Emergency Medical Treatment Unit, it is designed to meet conditions immediately following a military disaster.

The emergency packet, which contains 23 items, is designed for much more than first aid. It provides medical material for treatment of approximately 100 casualties for about 72 hours. The items included have been carefully selected, and training in their use will be carried out by all three services.

Design of the packet was based on the assumption that following a military disaster, no direct professional medical help may be expected. This would mean that casualties will either treat themselves or be cared for by other non-medical personnel.

The problems of mass casualty care are not necessarily confined to nuclear warfare, but can result from fires, floods, hurricanes and other civil disasters.

Packaged as one unit, the packet has nine component cartons: two master packs containing a synthetic plasma expander, surgical instruments and other items, fracture pack, burn and wound packs.

★ ★ ★

THE AIR FORCE is converting two B-47 *Stratojet* medium bombers into pilotless drone aircraft to be used for offensive and defensive test missions. The 100-ton jet bombers will take off, fly to the target, return and land, untouched by human hands.

Equipped with elaborate optical and electronic systems, the pilotless *Stratojets* will be used to measure and evaluate effectiveness of ground-to-air and air-to-air defense systems. Countermeasure systems can also jam ground radar and electronic missile-firing systems.

The first of the two prototypes, identified as QB-47 aircraft, should be delivered to the USAF's Air Research and Development Command this summer.

ARMY HELICOPTER PILOTS made nearly 300 landings on USS *Thetis Bay* (CVHA 1) during amphibious *Operation Rocky Shoals* off the coast of Central California.

The pilots, flying Army H-21 copters, were from the 57th Transportation Company. They carried troops of the 1st Battle Group, 12th Infantry, 4th Infantry Division. Both of their units are stationed at Fort Lewis, Washington.

Some of the pilots had never landed on or taken off from a ship before. However, in landings, cargo pick-ups and air discipline, they put on an impressive performance.

Three of the aircraft were launched after dark and two of them made night-time landings, even though their pilots had no previous carrier qualifications.

★ ★ ★

THE ARMY AND AIR FORCE teamed up during the last two weeks of February to conduct a major training operation in Panama.

"Exercise Banyan Tree" marked the first time that an airborne battle group was flown from the U. S. directly to a drop zone overseas. On arrival in Panama the airborne troops made an assault on "enemy aggressor forces."

Elements from the Strategic Army Corps and the Tactical Air Command were among more than 5000 Army and Air Force troops that took part in the two-week exercise.

A reinforced airborne battle group from the 82nd Airborne Division at Ft. Bragg, N. C., equipped with ***Honest John*** rockets, was the STRAC element in the maneuver.

Other Army units that participated included officers from Ft. Campbell, Ky., who acted as umpires, and a ***Chopper John*** rocket-launcher from the 377th Airborne Artillery. Aggressor forces were furnished by the 1st Battle Group, 20th Infantry of the Caribbean Army Forces.

The Tactical Air Command furnished 75 C-130 ***Hercules*** and C-123 ***Provider*** aircraft as troop carriers. Sewart AFB, Tenn., provided 37 of the ***Hercules*** transports used in the exercise.

In addition TAC had a composite air strike force consisting of F-100 tactical fighters, B-57 bombers and KB-50 tankers from the Ninth Air Force.

Units from Albrook and Howard AFBs in the Canal Zone also took part in the operation.

★ ★ ★

HIGH TEMPERATURE VAPOR is being tested at Wright-Patterson Air Force Base in Ohio as an element to replace oil as a lubricant for use in ball and roller bearings.

Hydrocarbon-air vapor, composed of film-forming agents, prevents abrasive metal oxides from forming on the bearings by continuously "filming" their rubbing surfaces. The film, in turn, combats welding and seizure of the bearings as they slide against a moving surface.

Bearings made of tool steel have been tested at speeds in excess of 10,000 RPMs and through temperature ranges of 100 to 900 degrees Fahrenheit. Early successes indicate that the vapor-lubricating method may offer certain advantages over liquid lubricants.

DERAILED—Train featuring 52-wheel drive is an Army overland cargo hauler that will track with precision.

THE ARMY HAS DEVELOPED a new, highly mobile communications center designed to direct its forces in combat.

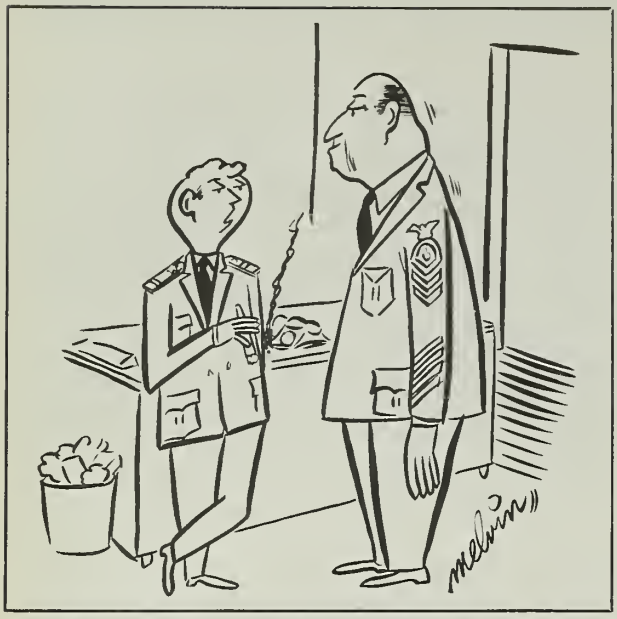
The system can be carried by helicopter to remote destinations in hours rather than days, or can be set up in otherwise inaccessible locations. With its communications tentacles spread over hundreds of miles, urgent messages can be sent to distant outposts even when direct lines are broken or destroyed.

For quick transportation and added versatility, the center is made up of separate aluminum houses or shelters. Each is fully equipped and independent. These can be used separately, or quickly hooked together to fit any battle situation. Small centers for the front lines would have two or three shelters; larger headquarters could have as many as 24.

The new system, the first fully air transportable message center of its kind, is the result of 12 years of design and research. It was developed under the guidance of the U. S. Army Signal Research and Development Laboratory, Fort Monmouth, N. J.

MOON STRUCK—Air Force *Thor-Able* lunar probe missile stands on pad prior to taking 79,000-mile space trip.

FIRST — J. F. Melvin, HM1, USN

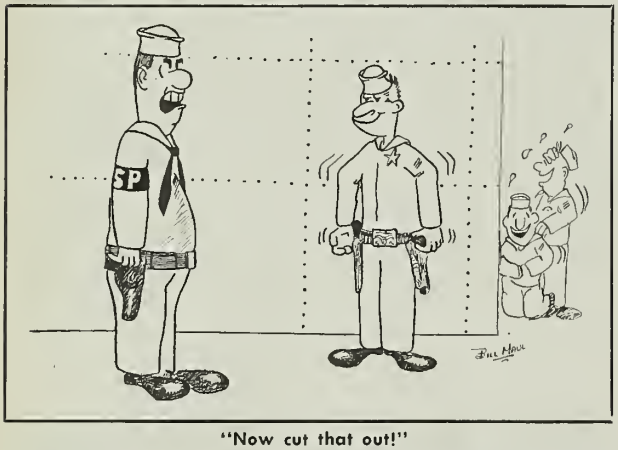


"During the C.O.'s absence, Chief, I'd appreciate having the men refer to me as the Old Man."

SECOND — R. Varesi, ADAN, USN

"Finished with your smoking break yet?"

THIRD — W. R. Maul, CT1, USN



"Now cut that out!"

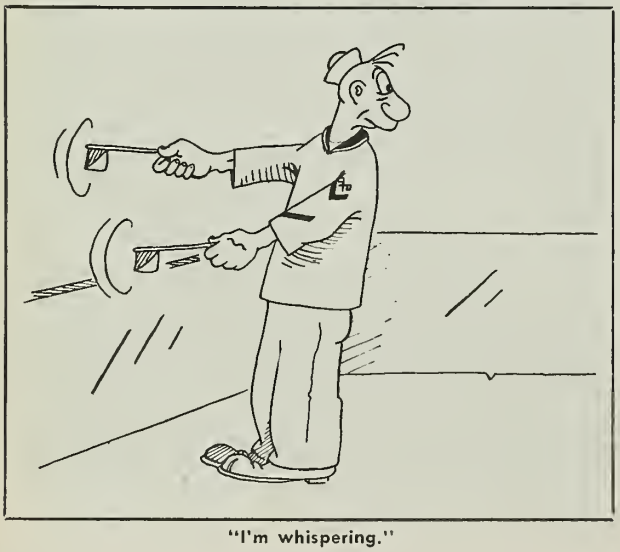
All-Navy Winners

THE FOURTH ANNUAL All-Navy Cartoon Contest has been won by Joseph F. Melvin, HM1, from the U.S. Naval Reserve Training Center, Brooklyn, N. Y. For Melvin it was a boost up the ladder of success as a Navy funny man. In last year's contest he won fourth place. This year, besides moving to the top of the winner list, he also copped 2nd and 5th honorable mention in the contest.

Second place cartoon entered in the contest was submitted by Richard Varesi, ADAN, from VW-15 at NAS Patuxent River, Md. He also took 11th place honorable mention.

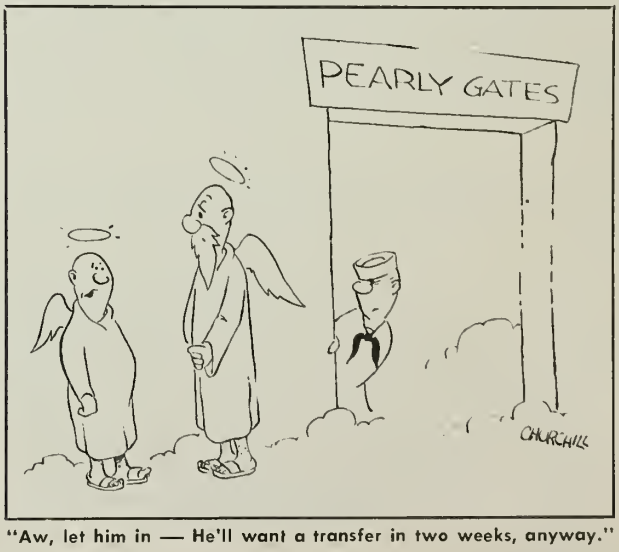
William R. Maul, CT1, hit with four different cartoons—more than any other entrant. He won 3rd place.

FOURTH — D. B. MacDougall, SMCS, USN



"I'm whispering."

FIFTH — D. S. Churchill, QM2, USN



"Aw, let him in — He'll want a transfer in two weeks, anyway."

plus 7th, 10th, and 15th honorable mention. For Maul, this was also a return to victorious grounds. In the second annual contest he won third place.

Fourth place honors went to Donald B. MacDougall, SMCS, from the Staff of the Commander Amphibious Squadron Six, U.S. Atlantic Fleet, and fifth to Donald S. Churchill, QM2, assigned on board USS *Spoonbill* (MSC 202).

All-Navy Championship Trophies furnished by the Chief of Naval Personnel will be presented to the first five winners by their commanding officers.

Fifteen cartoons were given honorable mention. Two multiple winners in the honorable mention field, besides the ones who also took trophies, were LT Billups E. Lodge, U.S. Fleet Air Defense Training Command, Dam Neck, Va., who took 1st, 13th, and 14th honorable mention, and Donald R. Stoner, PN3, U.S. Naval Air Reserve Training Unit, NAS Anacostia, D. C., who won 8th and 9th place honorable mention in the contest.

John E. Daniel, SFCA, USS *Daniel A. Joy* (DE 585), took 6th honorable mention; Donald D. Cole, PHG3, NAS Corpus Christi, Texas, 8th place; Joseph L. Wages, CS3, USS *Excel* (MSO 439), 9th place; and Jean E. Cornish, AT3, Wave, from NAS North Island, San Diego, Calif., 12th place.

Several points were noted by the five judges of this year's contest. First of all, as a group the general quality of the cartoons was superior to those submitted in years past. Secondly, although dependents of active duty personnel were allowed to enter the competition, only a very few submitted work. None was selected as a winner. Thirdly, the number of multiple winners was prominent. Five men in the contest won with more than one cartoon.

To be entered in the competition, cartoons had to be on a Navy theme or background, be in good taste, and be suitable for general consumption. Besides this, cartoons were judged not only for their humor but for the artistic ability of the artist. Competition was so keen that the judges adopted a point system to select a winner.

Several hundred cartoons were entered in this year's contest. Many were very good and deserve recognition, but unfortunately only five trophies and 15 honorable mentions could be presented. As an added incentive to submit cartoons in future All-Navy cartoon contests, recognition will be given to good cartoons that were not given awards. Besides the five winners and first five honorable mention cartoons which appear here, the remainder of the honorable mentions, plus other runners-up, will be published in this, and future issues of ALL HANDS Magazine.

Winners' names will also be published in a forthcoming issue of the Special Services Newsletter.

FIFTH HONORABLE MENTION
J. F. Melvin, HM1, USN

"A horrible thought just crossed my mind . . . I forgot to bring the A.P.C.'s!"

FOURTH HONORABLE MENTION
D. R. Stoner, PN3

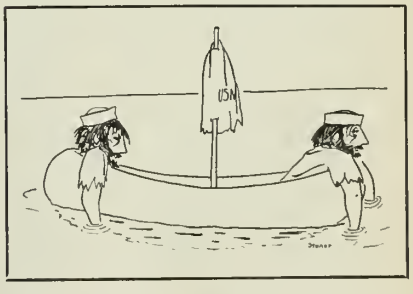
"Bet you had to do some talking to keep it."

FIRST HONORABLE MENTION
LT B. E. Lodge, USN

SECOND HONORABLE MENTION
J. F. Melvin, HM1, USN

"Yes, Dickson, it is unusual. However, the Navy Department insists on certain color schemes to maintain an over-all order of appearance."

THIRD HONORABLE MENTION
D. R. Stoner, PN3



"Seven-eighths of the earth's surface covered with water and we have to cover every inch."

THE WORD

Frank, Authentic Advance Information On Policy—Straight From Headquarters

• **ALL-NAVY, INTER-SERVICE EVENTS**—With the All-Navy basketball and telegraphic bowling tournaments out of the way, here's a rundown of upcoming All-Navy and Inter-Service events:

ALL-NAVY

Photo Contest	May 1959	BuPers, Washington, D.C.
Tennis	20 Jul-2 Aug	NavSta., Newport, R. I.
Talent Contest	Contemplated	Details Unknown
Softball	3-6 Sept.	ComServLant, Norfolk, Va.
Golf	25-28 Sept.	NAS Pensacola, Fla.

Owing to budgetary limitations and because of the Pan American Games, there will be no All-Navy boxing or baseball playoffs this year. A Navy squad was selected to participate in the Inter-Service Championships held earlier this month at Ft. Benning, Ga. This squad will also represent the Navy in the Pan American Games. Similar plans are being made for other sports such as swimming, track and field, rowing, fencing and speed skating.

INTER-SERVICE

Photo Contest	June 1959	Hosted by Marine Corps at Pentagon Bldg., Washington, D.C.
Tennis	11-15 Aug	Hosted by Marines at Quantico, Va.
Golf	6-9 Oct	Hosted by Navy at NAS Glenview, Ill.

The Pan American Games will be held in Chicago, 27 Aug—11 Sep 1959. Navymen who feel they possess the necessary ability, and desire to compete in their sports specialties, should apply for training and for participation in these games in accordance with BuPers Inst. 1710.2.

• **AVIATION ELECTRONICS OFFICERS SCHOOL**—An advanced school for Aviation Electronics Officers has opened at NATTC Memphis.

This new school offers 52 weeks of advanced electronics training to selected limited duty and warrant officers. The Navy and Marine Corps officers attending this school receive advanced professional education "which will enable them to provide the working level and technical leadership required to obtain optimum performance from aviation electrical and electronic systems and equipment."

Staffed by graduates of the Naval Postgraduate School, civilian electronic specialists and selected chief petty officers and master sergeants, the school offers a curriculum equivalent to that given during the second and third years at a civilian engineering college.

• **UNIFORM CHANGES** — Three uniform changes, affecting chiefs, Waves and officers, have been approved by the Secretary of the Navy.

Male CPOs will be wearing metal rank insignia on their shirt collars by 1 July. The devices will be worn on both shirt collar points of the khaki, tropical white, tropical khaki, and blue flannel shirts.

The collar device is a miniature of the CPO garrison cap device which is to be of a size which could be fitted into a 15/16-inch circle. It will not be issued by the Navy and will not be stocked in the Navy Supply System. But it will be available at Navy Exchanges in the near future. Cost will be nominal.

Also adopted is a new women's summer uniform for wear by officers and enlisted personnel. It will be made of a light blue and white striped, corded dacron/cotton fabric consisting of a skirt and short-sleeve jacket with a garrison cap and hat cover to match.

The present gray seersucker dress will be discontinued when sufficient quantities of the new uniform become available.

The third change eliminates tan gloves for wear by officers with the Service Dress Khaki uniform.

• **WANT ATTACHE DUTY?** — If you have a good record, like responsibility, can work without close supervision, and can meet and get along well with others, there may be a billet for you in a Naval Attache office.

This is choice sea duty. You receive good station allowances, and sometimes, government quarters are furnished. Married men are not ordered to posts where dependents are prohibited, except when the prohibition occurs after orders have been issued. Concurrent travel is permitted to most posts, although it is desirable in some cases for you to precede your dependents so that you can arrange for housing.

Tours of duty are from two to three years, the shorter tours being for the more isolated posts. One-year extensions are obtainable if performance is satisfactory. Civilian clothes are worn on attache duty.

Requirements for this duty are tough, and anyone considering it should first make a frank appraisal of his own suitability. Men who have exhibited any weakness of character, have any record of disciplinary action, drink to excess, or are not well qualified in their rating should not apply. Because of the sensitive nature of the duties performed, and the close relationship with the foreign community, only persons with the strongest sense of responsibility and dedication are desired.

WHICH ONE IS THE TENTH MAN? Keep him in mind and pass this copy of ALL HANDS to him and eight others.

Before you request this duty, there are certain other requirements with which you should be familiar. You must:

- Be on sea duty and eligible for Seavey.
- Have no record of civil arrest.
- Be financially solvent. Indebtedness correspondence or any indication of non-payment of just debts is disqualifying.
- Have at least 36 months' obligated service at time of transfer (or agree to extend). If you have over 17 years' active service, you must agree to remain on active duty for three years.
- Be a U. S. citizen.
- Have no more than three dependents if a CPO; two, if PO1; one, if PO2; and none, if PO3 or below.

If you are eligible for Seavey, and want an attache billet, you must first request it on the Seavey card. A location of "anywhere" will increase the chances of selection and, although there are some locations to be preferred over others, it's all good duty. After the Seavey card request, follow up with NavPers 1339(Rev. 56) which provides up-to-date information on your performance of duty and gives your commanding officer's opinion of your suitability.

On your request (NavPers 1339) you may list three choices of duty by country or area. You may indicate "anywhere," however, to signify that you will accept any billet of its kind, any place in the world. If "anywhere" doesn't appeal to you, indicate an area rather than a particular country and your chances of being selected for a billet will be greatly increased. Data on the number, age and location of your dependents is necessary. Additional information regarding the birthplace of your wife and parents will also be needed. Requests for attache duty are not acknowledged by the Bureau.

Men who are selected are ordered to Washington, D.C., for a period of special instruction (this sometimes includes language school) before going on to their new post.

For those who have had a tour of attache duty, this should be no deterrent to re-application. You will not be sent to the same post, and your previous experience will neither help nor hurt your chances of re-selection. You must, however, have at least four years between assignments. Waivers are rarely granted.

Attache billets are located in the following cities around the world: Buenos Aires, Argentina; Melbourne, Australia; Rio de Janeiro, Brazil; Rangoon, Burma; Ottawa, Canada; Colombo, Ceylon; Santiago, Chile; Havana, Cuba; Copenhagen, Denmark; Ciudad Trujillo, Dominican Republic; Cairo, Egypt; Helsinki, Finland; Paris, France; Bonn, Germany; Athens, Greece; Hong Kong, British Crown Colony; New Delhi, India; Djakarta, Indonesia; Tehran, Iran; Baghdad, Iraq; Tel Aviv, Israel; Rome, Italy; Tokyo, Japan; Seoul, Korea; Beirut, Lebanon; Singapore, Malaya; Mexico City, Mexico; Casablanca and Rabat, Morocco; The Hague, Netherlands; Oslo, Norway; Karachi, Pakistan; Lima, Peru; Manila, Philippines; Warsaw, Poland; Lisbon, Portugal; Moscow, Russia; Madrid, Spain; Stockholm, Sweden; Taipei, Taiwan; Bangkok, Thailand; Ankara, Turkey; London, United Kingdom; Montevideo, Uruguay; Caracas, Venezuela; Saigon, Viet-Nam; and Belgrade, Yugoslavia.

The following ratings and rates are now eligible for attache billets: ADC, ATC, AT1, DKC, DK1, EMC, SD1, SD3, SKC, SK1, YNC, and QM1, RMC, RM1, RM2, RM3, ENC, HMC, PH1, PH2, QMC, YN1.

- **NEW ADDRESS**—All NSLI and USGLI correspondence should be addressed to Philadelphia, Pa., NOT Washington, D.C. This section of the Veterans Administration transferred its offices to Philadelphia in February 1958, but much correspondence is still being sent to the old address in Washington.

Here's the correct address for all general correspondence and forms:

Veterans Administration District Office
Post Office Box 8079
Philadelphia 1, Pa.

All treasury checks, money orders, and other types of individual payments for both NSLI and USGLI policies go to:

Veterans Administration District Office
Post Office Box 7787
Philadelphia 1, Pa.

Various VA forms and pamphlets may still indicate that correspondence should be sent to Washington, D.C. These were printed before the move to Philadelphia was made.

QUIZ AWEIGH

With the next examinations for advancement in rating just around the corner, it may be to your advantage to check yourself on a few "simple" general-knowledge questions that seem to appear in every examination. Here goes:

1. When a ship is underway, the national ensign normally is flown from (a) the flagstaff, (b) jackstaff, (c) gaff.

2. Two gold sprigs of two oak leaves with a silver acorn at the stem of each sprig make up the device for the (a) Supply Corps, (b) Civil Engineer Corps, (c) Dental Corps.

3. The last part of a ship's compartment number usually is a capital letter which identifies the primary purpose of the compartment. In a ship built after March 1949, if the number ends with the letter "L," the compartment will be a (a) passageway, (b) laundry, (c) plotting room.

4. An enlisted man who "conforms to Navy standards" in military behavior and appearance would be assigned a performance evaluation mark of (a) 3.6 or 3.4, (b) 3.2 or 3.0, (c) 4.0.

5. A YTB is a (a) Fleet tug, (b) harbor tug, (c) auxiliary tug.

6. Ocean-going tugs are named for (a) Indian tribes, (b) Indian chiefs, (c) Indian heroes.

7. The greatest degree of radiation from an atomic blast is caused by a bomb exploded (a) in the air, (b) underground, (c) underwater.

8. The most serious damage caused by an atomic bomb that explodes in the air would be from (a) radiation, (b) thermal wave, (c) blast effect.

9. Changes in *Navy Regulations* cannot be made unless they are approved by (a) CNO, (b) SecNav, (c) the President of the United States.

10. The "father of modern ordnance and gunnery" in the U. S. Navy was (a) Matthew Fontaine Maury, (b) John A. Dahlgren, (c) William S. Sims.

The answers to this month's Quiz Aweigh can be found on page 53.

THE BULLETIN BOARD

Here's Latest Information on Navy's Tuition Aid Program

THE CAREER NAVYMAN stationed near a college or university is in a good spot to further his education with the help of the Tuition Aid Program. In case you've been thinking about taking spare-time college courses, here's a rundown on the program to remind you what it's all about.

Tuition aid is for the benefit of those who are making the Navy a career. Its primary purpose is to help the individual who is working for his first bachelor's degree. However, it is also open to those who want to do graduate work in certain fields of particular interest to the Navy.

Allotments for the program are furnished, as needs dictate and funds permit, to commandants of naval districts and river commands and to certain force commanders. These funds are used for the partial payment of tuition for voluntary off-duty courses, taken with commanding officers' approval, at colleges, universities and junior colleges which have received the approval of regional accrediting associations. (The Territorial College of Guam and the University of the Philippines are approved for this program.)

Only those courses taken for credit (including extension credit) will be approved by your CO. If a course is on the undergraduate level, it must contribute to qualifications for a first baccalaureate. If it's on the graduate level it must be in one of the following fields: mathematics, physical science, international relations, education, management or (for personnel assigned to public relations programs and billets only) mass communications. In most cases graduate students are not permitted to enroll in undergraduate courses. However, exceptions will be made for undergraduate courses which are prerequisite to graduate courses integral to the applicant's program of study.

An applicant for the program who already holds a bachelor's degree must satisfactorily justify (in writing) courses on the undergraduate level or courses which have no immediately apparent relationship to the six permitted fields of graduate study.

Tuition aid will not be approved for courses on the high school level, correspondence courses or undergraduate courses which are not part of a program for a first baccalaureate or prerequisite to graduate courses in an approved field.

The student receiving assistance under the program must pay, out of his own pocket, at least one fourth of his tuition costs, plus all costs other than tuition. The Navy will pay the remaining three-fourths of the tuition costs up to a limit of $7.50 per semester hour or $5.00 per quarter hour. In other words, if the tuition for a course came to $15.00 per semester hour, the Navy would pay only $7.50 (half the cost) while the student would have to pay the other half himself.

To be eligible for the program an applicant must:

- Be on active duty, either in the Regular Navy or Reserve.
- Sign an agreement to remain on active duty for two years after completion of a course (if he's an officer) or (if he's enlisted) be on a second or subsequent enlistment. The first enlistment may have been in one of the other services.
- Agree that if he withdraws from a course or courses of his own volition he will repay the government any tuition paid in his behalf. (Repayment is not required if the student has to withdraw because of circumstances beyond his control, such as reassignment, hospitalization or changes in duty hours.)

So far as the student is concerned, application procedure for the program is quite simple.

The first step is to talk to your I & E officer or other educational counselor about the course or courses suited to your needs, qualifications and educational program.

After that, you apply for admission to the school or request a statement that you will be accepted. Of course, if the school has no formal admission procedures, this step may be eliminated.

When you have been notified that you will be accepted, submit a request for approval of funds to the appropriate district commandant or force commander, via your commanding officer. In the case of officers, one copy of this request must be marked for the Chief of Naval Personnel (Pers-E221) and signed. If justification of the course is required, another copy of the applica-

All-Navy Cartoon Contest
Honorable Mention
LT B. E. Lodge, USN

"What! This isn't counted as sea duty?"

All-Navy Cartoon Contest
Honorable Mention
W. R. Maul, CT1, USN

"I'm going to make a great big, handsome, adorable, lady-killing MAN out of you, Martin!"

tion is needed for forwarding to the district commandant or force commander.

Once you've taken care of these matters, most of the other details are up to your CO and the district commandant or force commander concerned.

Any questions you may have about the program can probably be answered by consulting BuPers Inst. 1560.10B.

Regulations on Decorations, Awards and Gifts Made By Foreign Governments

Been a hero on foreign shores lately? If so, or if you have performed any outstanding work for a foreign government in connection with your military duties, the Secretary of the Navy has a message for you.

In the recently issued SecNav Inst. 1650.9 he reiterates, with a few minor changes, the Congressional precept that active duty members of the U. S. Navy and Marine Corps or members of Reserve components or civilian members of the Navy and Marine Corps may not

> "without the consent of the Congress, accept any decoration, award, gift, emolument, office, or title of any kind whatsoever from any king, prince or official or a foreign government. A decoration, award, or gift tendered any officer of the United States, civil or military, by any foreign government shall be forwarded through the military department concerned to the Department of State where it will be held in escrow pending the consent of Congress."

This applies even though the services for which the award was made were not related to your military duties; nor may the decoration, award or gift be presented to any member of your immediate family.

These regulations do not apply to any foreign decoration awarded for services while you were a member of the armed forces of a friendly foreign nation, provided the award is accepted before you entered the U. S. Navy. However, if you have been awarded a decoration under such circumstances you are required to make application to the Secretary of the Navy for authority to wear the decoration on your uniform.

If you are told that a foreign nation has made an award to you and that your presence is desired at a formal presentation ceremony, you will be allowed to participate in the ceremony and receive the tender of the award, unless you are performing duty in connection with the Military Assistance Program.

Immediately following the presentation ceremony, you must forward the decoration and all papers such as citation or diploma, to the Chief of Naval Personnel or to the Commandant of the Marine Corps, as appropriate, with a statement in explanation of the award.

The Chief of Naval Personnel or the Commandant of the Marine Corps will obtain the necessary approval of the Chief of Naval Operations, and forward all decorations, awards and gifts from foreign countries to the Department of State pending enactment of legislation authorizing acceptance by the recipient.

The Department of State is directed by law to furnish each alternate Congress with an omnibus bill authorizing officers to accept

HOW DID IT START

First U.S. Shot of World War I

In the Naval Cemetery at Agana, Guam, lie the graves of seven sailors from the German cruiser Cormoran, which sank in Apra Harbor on 7 Apr 1917.

The story behind those graves goes back to 1914, the year World War I began. At that time, many of the islands surrounding U. S.-governed Guam were German colonies, and when Japan went to war against Germany she started taking them over one by one. Since Cormoran was in the area at the time, the Japanese pursued her until, short on fuel and rations, she sailed into Apra Harbor. There she was interned by the Naval Governor.

While Cormoran was interned, her crew and the 50 men of USS *Supply*, the American station ship at Guam, became good friends. The crew from the American ship shared their rations with the Germans, and on weekends most of the Guamanians of *Supply*'s crew invited the Germans to their homes.

The situation changed on 7 Apr 1917, for west of the International Date Line that was the date the United States declared war on Germany.

As soon as word of the declaration was received, LT William Alden Hall, *Supply*'s Executive Officer, set out with a boatload of Americans to seize the German ship. The lieutenant had been promised command of Cormoran.

That was not to be. As the American boat approached the German ship, Cormoran blew up. Her skipper had destroyed her, rather than surrender her to the Americans.

The attempted seizure resulted in what some claim was the first rifle shot to be fired at the enemy after the United States entered the war. The shot, directed across the bow of a German motorboat which was leaving Cormoran, was fired from the American boarding boat by a Marine corporal named Cordrey.

In the scuttling of Cormoran a German warrant officer and six firemen lost their lives. These casualties were buried at Agana. The rest of Cormoran's crew — about 350 men—were transferred to an American prisoner-of-war camp in Manila.

Before the Cormoran survivors left Guam they erected a marker in the cemetery which still stands today beside the graves of the German sailors.

The marker is not the only evidence that Cormoran is remembered. Every June the Cormoran survivors hold a reunion in Germany.

The friendship between the men of USS *Supply* and the crew of the German ship is not forgotten either. Retired CPO John J. Wagner, of Norfolk, Va., who was on board *Supply* in 1917, still keeps up a regular correspondence with Cormoran crew members he met on Guam two World Wars ago.

—Robert J. Bova, JO2, USN.

the decorations, awards and gifts tendered to them by foreign governments. Those listed include only members who have retired *permanently* from federal service.

When you are discharged or retired, you should notify the Chief of Naval Personnel or Commandant of the Marine Corps, as appropriate, in order that action may be taken with reference to your awards.

These provisions will be incorporated in the *Navy and Marine Corps Awards Manual* (NavPers 15790) as soon as practicable.

List of New Motion Pictures Available for Distribution To Ships and Overseas Bases

The latest list of 16-mm., feature movies available from the Navy Motion Picture Service, Bldg. 311, Naval Base, Brooklyn 1, N. Y., is published here for the convenience of ships and overseas bases. The title of each picture is followed by the program number.

Those in color are designated by (C) and those in wide-screen processes by (WS). Distribution began in January.

The Lost Missile (1227): Science Fiction; Robert Loggia, Ellen Parker.

Ride A Crooked Mile (1228) (C) (WS): Western; Audie Murphy, Gia Scala.

The Man Who Died Twice (1229) (WS): Melodrama; Rod Cameron, Vera Ralston.

Cat On A Hot Tin Roof (1230) (C): Drama; Elizabeth Taylor, Paul Neuman.

Tunnel Of Love (1231) (WS): Comedy; Doris Day, Richard Widmark.

Apache Territory (1232) (C): Western; Rory Calhoun, Barbara Bates.

Wolf Larsen (1233): Drama; Barry Sullivan, Peter Graves.

Wind Across The Everglades (1234) (C): Melodrama; Burl Ives, Christopher Plummer.

Reluctant Debutante (1235) (C) (WS): Comedy; Rex Harrison, Kay Kendall.

Wild Heritage (1236) (C) (WS) Melodrama; Will Rogers Jr., Maureen O'Sullivan.

The Light In The Forest (23) (1237) (C): Melodrama; Fess Parker, Wendell Corey.

Separate Tables (1238): Drama; Rita Hayworth, Deborah Kerr.

Villa (1239) (C) (WS): Melodrama; Brian Keith, Cesar Romero.

The Saga Of Hemp Brown (1240) (WS): Western; Rory Calhoun, Beverly Garland.

The One That Got Away (1241): Melodrama; Hardy Kruger, Colin Gordon.

Damn Yankees (1242) (C): Musical Comedy; Tab Hunter, Gwen Verdon.

Distribution of the following films began in February.

Tank Force (1243) (C) (WS): Melodrama; Victor Mature, L. Genn.

Revolt in the Big House (1244): Melodrama; Gene Evans, Robert Blake.

Hong Kong Confidential (1245): Melodrama; Gene Barry, Beverly Tyler.

Me and the Colonel (1246): Drama; Danny Kaye, Curt Jurgens.

The Restless Years (1247) (WS): Drama; John Saxon, Sandra Dee.

Appointment with a Shadow (1248) (WS): Melodrama; George Nader, Joanna Moore.

The Last Hurrah (1249): Comedy; Spencer Tracy, Jeffrey Hunter.

Enchanted Island (1250) (C): Melodrama; Dana Andrews, Jane Powell.

Party Girl (1251) (C) (WS): Drama; Robert Taylor, Cyd Charisse.

Torpedo Run (1252) (C) (WS): Drama; Glenn Ford, Ernest Borgnine.

Murder by Contract (1253): Drama; Vince Edwards, Phillip Pine.

The Matchmaker (1254): Comedy; Shirley Booth, Anthony Perkins.

Money, Women and Guns (1255) (C) (WS): Western; Jack Mahoney, Kim Hunter.

Queen of Outer Space (1256) (C) (WS): Science Fiction; Zsa Zsa Gabor, Eric Fleming.

When Hell Broke Loose (1257): Drama; Charles Bronson, Richard Jaeckel.

Timbuktu (1258): Drama; Victor Mature, Yvonne DeCarlo.

Seavey Segment Two Goes Into Effect Beginning 1 June

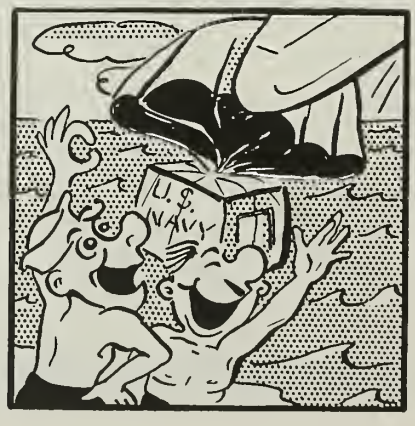
Seavey Segment 2-59, which becomes effective on 1 Jun 1959, will result in longer tours of sea duty for all of the 22 different ratings covered in this segment.

The sea duty extensions have been caused by the outgrowth of billet reductions ashore which resulted in a reduction of requirements.

If you were on last year's Seavey Segment 2-58 and have not been ordered ashore by 31 May 1959

All-Navy Cartoon Contest

Honorable Mention



D. D. Cole, PHG3, USN

when that segment ends, you will be ordered ashore as quickly as possible after 1 Jun 1959.

If you have insufficient obligated service to be ordered ashore as of 31 May 1959, you will be placed in the inactive Seavey for Segment 2-59.

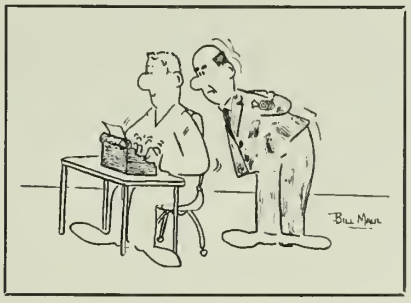
Personnel who are on Seavey Segment 2-59 will not be reassigned except to shore duty under the Seavey procedures unless the urgency of the situation or the completion of overseas tour requires an intra-Fleet transfer before rotation ashore. In this respect, personnel in Segment 2-59 on overseas tours whose tour expires before 30 Apr 1959 and who are not to be extended, will be reassigned to sea duty.

If you are serving on overseas shore duty, or in a non-rotated unit and your tour of duty expires later than 16 months after 1 Jan 1959—the effective date of Seavey Segment 2-59—you will not receive a rotation data card this year. Navymen serving on overseas shore duty whose tour expires after 1 Oct 1960 will receive their rotation data cards in March 1960, provided their tour overseas expires before 1 Oct 1961.

According to BuPers Notice 1306 of 9 Jan 1959, which announces the sea-tour commencement cut-off dates for personnel in Seavey Segment 2-59, rotation data cards were mailed on 15 February for personnel in the following rates whose sea tours began in the month and year shown, or earlier:

CSC, 1 2, 3, CSSN	Jun 1956
SHC	Sep 1956
SH1, 2, 3, SHSN	Dec 1952
MMC	Mar 1955
MM1, 2, 3, MMFN	Mar 1954
ENC	Dec 1955
EN1, 2, 3, ENFN	Jun 1954
MRC, 1, 2, 3, MRFN	Sep 1955
BTC	Sep 1955
BT1, 2, 3, BTFN	Jun 1952
BRC	Sep 1955
BR1	Jun 1952
EMC	Sep 1956
EM1, 2, 3, EMFN	Jun 1956
ICC, 1, 2, 3, ICFN	Dec 1956
SFC	Dec 1955
SF1, SFM/SFP 2, 3, SFMFN/SFPFN	Sep 1954
DCC	Jun 1956
DC1, 2, 3, DCFN	Sep 1955
PMC	Jun 1956
PM1, 2, 3, PMFN	Sep 1955
MLC	Aug 1956
ML1, 2, 3, MLFN	Nov 1952
SVC, 1, 2, 3, SVCN	Mar 1957

All-Navy Cartoon Contest
Honorable Mention
W. R. Maul, CT1, USN



". . . so guess I'd better close and get back to work before this little baldheaded chief I work for comes in here screaming his ugly head off . . ."

CEC, 1, 2, 3, CECN	Dec 1956
EOC	Sep 1956
EO1, EON/EOH2, 3, EONCN/EOHCN	Jun 1956
CMC, 1, 2, 3	Sep 1956
CMCN	Jun 1955
BUC, 1, 2, 3, BUCN	Dec 1956
SWC	Sep 1956

Manual Ready on *Service Etiquette*

A book on etiquette, written strictly from the military viewpoint, has been published by the U. S. Naval Institute for those who want a handy guide to correct social usage for official and unofficial occasions.

Entitled *Service Etiquette*, the book was written by Read Admiral Bruce McCandless, USN (Ret.); Captain Brooks J. Harral, USN; and Oretha D. Swartz. It is included among the selections of the Bureau's Library Services Branch for distribution to ships and stations.

In its 368 pages it answers all sorts of questions about the intricacies of military etiquette. Although especially slanted toward the needs of the young officer, it covers many subjects of interest to all Navymen.

Among the chapter headings are:

Good Manners in Uniform and Out, Service and Civilian Dress, Manners at the Table, Dining in Public Places, Tipping Charts, Table Service, The Art of Conversation, Etiquette of the Quarterdeck, Salutes, Flag Etiquette.

SW1, 2, 3, SWCN	Sep 1955
UTC, 1, 2, 3, UTCN	Dec 1956
SDC	Dec 1956
SD1, 2, 3, TN	Mar 1954

All rotation data cards must be returned to the reporting PAMIs. If cards are not received for eligible personnel, the required information should be sent to the PAMI in a typewritten list or on blank cards which are provided. The lack of obligated service does not make a man ineligible for entry on Seavey.

If rotation data cards are received for personnel who have been transferred, commands should note the new duty station on the control listing and return the rotation data cards and all forms to the reporting PAMI. When new personnel are received who were eligible for Seavey Segment 2-59 as of 9 Jan 1959, commands should check to see if a rotation data card was sent to a PAMI by a previous command. If a card was not sent, or if in doubt, required information should be sent to reporting PAMI by speedletter.

List of New Correspondence Courses Available to EMs

Six new Enlisted Correspondence Courses are now available. They are:

Course	NavPers No.
*Mathematics, Vol. 1	91219-1
*Quartermaster 3 & 2	91286-2
I. C. Electrician 1 & C	91531
Aviation Structural Mech 3 & 2, Vol. 2	91623
Aviation Ordnanceman 1 & C	91662

*May be taken for repeat NR credit.

Discontinued Courses

Course	NavPers No.
Mathematics, Vol. 1	91219-C
Quartermaster 3, Vol. 1	91284-C
Quartermaster 2, Vol. 1	91286-1A

Enlisted Correspondence Courses will be administered (with certain exceptions) by your local command instead of by the Correspondence Course Center.

If you are on active duty, your division officer will advise you whether the course for which you have applied is suitable to your rate and to the training program you are following. If it is, he will see that your application (NavPers 231) is forwarded to the Center, which will supply course materials to your command for administration.

Those on inactive duty will have courses administered by the Center.

Getting Ready to Move Your Family? Check These Locations

WHEN A MARRIED NAVYMAN is transferred to a new duty station, there is always one major problem—housing for his family. At most bases this problem is not too difficult to solve. Civilian housing is fairly plentiful and in some cases government housing is available.

However, you may not always have reliable information. Sometimes you may be lucky and get housing almost immediately, but other times, you and your family must live in a motel or hotel for an extended period.

The Navy tries to help here, as in so many other areas. Recently the Bureau of Naval Personnel queried commands at known congested areas to learn if housing was still critical. Here are the results:

• *Oahu, T.H.*, government-controlled enlisted housing has a one-to-12 month waiting list, depending on the man's rate and size house required. For officers, the waiting period is from one to five months. Private housing is hard to find and expensive when found. The Commander-in-Chief, U.S. Pacific Fleet, recommends that dependents not be brought until housing arrangements have been made.

• Men being transferred to the *Naval Ordnance Test Unit at Patrick Air Force Base, Cocoa, Fla.*, will find a similar situation. Although government quarters are available for most senior ranks and rates, junior officers and second class POs and below will find the housing situation critical. Few civilian rentals are available and then only at very high rates.

• At the *Naval Missile Facility, Point Arguello, Calif.*, housing is a serious problem, especially for transient military and civilian personnel. Motel and hotel accommodations are 20 miles away and usually not immediately available. At nearby Vandenberg Air Force Base, a limited number of transient overnight Bachelor Officer Quarters are available for captains and above, and for GS-14 civilians or above. *Prior, reservations must be made even for these however.* Only two to four transient enlisted men at one time can be accommodated at this facility. Civilian housing in the area is critical.

• At the *U.S. Naval Postgraduate School, Monterey, Calif.*, housing is difficult to obtain. Most personnel, however, who do take their dependents with them find housing without exceptional hardship. The housing situation is tight, but not critical.

• Officers who are going to *Newport, R.I.*, for temporary duty under instruction are advised not to take their dependents. There are no government quarters available. They must live in civilian housing which is very difficult to find.

• Housing at the *U.S. Naval Submarine Base, New London, Conn.*, is no better. Although availability has improved slightly during the last year, it is still considered critical.

• Both public quarters and civilian rental housing in the *Camp Lejeune, N.C.*, area are extremely critical. The Commanding General of Camp Lejeune said that the housing situation is now worse than it was in 1955. There is hope, however. Some Capehart Housing units are scheduled to be finished late this year. These should ease the housing problem somewhat.

Several other places have a housing problem. *U.S. Naval Air Station, Patuxent River, Md.*, reports that housing is available for enlisted personnel, but for officers there is a long waiting list. There is a four-month waiting list for Wherry Housing for officers in the *Great Lakes* area and the waiting period for enlisted personnel is sometimes as long as eight to nine months. Civilian housing is also scarce. *Key West, Fla.*, reports a critical housing situation.

When you're being transferred to a new base or city not mentioned above, take into consideration that you may not find adequate housing immediately. Be prepared to live in a hotel or motel for a short time.

If you're going to one of the places listed above, it would be advisable for you to precede your dependents. It will probably save you money and inconvenience.

NOW HERE'S THIS

Music Man

Quite a few Navymen may play guitars during their spare time. However, it takes a much more complicated hobby than that to satisfy W. J. "Jim" Harvey, ADC, USN, of Fleet Air Service Squadron 12 at NAS, Miramar, Calif.

At the latest count the chief had built 14 mandolins and guitars — not just the plain old garden variety—but those fancy jobs with enough electronic gadgets on them to track down a submarine.

Except for tuning keyheads and electronic parts, the chief's creations are completely hand-made.

He figures it takes him about 230 hours to build just one instrument.

Moving Day for RecSta from Washington to Anacostia

The U.S. Naval Receiving Station, Washington, D.C., is scheduled to vacate its present site to permit construction of a new highway. It will be relocated at the nearby Naval Air Station, Anacostia.

The move will take place on or about 1 Jan 1961 when flight operations at the air station will be terminated and all BuAer activities there, with the exception of the Naval Photographic Center, will be moved to Andrews Air Force Base at Suitland, Md.

The Air Force has allocated space to the Navy at Andrews Field for construction of aviation and support facilities for the units now at Anacostia. Another runway is being constructed to handle the increased air traffic.

In conjunction with this merger, the Navy will expand and operate the Naval Auxiliary Air Station, Webster Field, in the vicinity of the Patuxent River Naval Air Station in southern Maryland. This activity will serve as a subordinate

All-Navy Cartoon Contest
Honorable Mention
R. Varesi, ADAN, USN

"Waddaya mean throw you back? You're over five inches long!"

training field for Navy and Air Force jet aircraft based at Andrews.

The expanded facilities at NAAS Webster Field will include an 8000-foot runway, a control tower, ground control approach gear, instrument landing system, crash and rescue equipment and a limited refueling setup.

When the move is complete, the new Receiving Station, through the use of existing structures at NAS Anacostia, conversion or new construction, will provide:

- Headquarters for the Potomac River Naval Command.
- Naval Photographic Center.
- Heliport and attendant facilities.
- Intelligence School, Music School.
- Wave barracks.
- Chapel.
- Thirty units of family quarters.
- Swimming pool and other appropriate indoor and outdoor recreation facilities.

Mine Warfare School Moves From Yorktown To Charleston

The Naval School, Mine Warfare, has been moved from Yorktown, Va., to Charleston, S.C.

Of 25 officers and 184 enlisted men formerly on the staff of the Yorktown school, about 13 officers and 54 enlisted men made the move to Charleston. The rest were reassigned to other duties after active training ended at Yorktown in December.

By the move, the Navy expects to reduce costs for transportation, school facilities and upkeep, and to make more effective use of manpower. These results are possible because Charleston is headquarters of Commander, Atlantic Fleet Mine Force, and the center of Fleet mine warfare operations on the East Coast.

The relocation is part of the Navy's continuing effort to make efficient and economical use of the funds allocated to it by Congress.

DIRECTIVES IN BRIEF

This listing is intended to serve only for general information and as an index of current Alnavs and NavActs as well as current BuPers Instructions, BuPers Notices, and SecNav Instructions that apply to most ships and stations. Many instructions and notices are not of general interest and hence will not be carried in this section. Since BuPers Notices are arranged according to their group number and have no consecutive number within the group, their date of issue is included also for identification purposes. Personnel interested in specific directives should consult Alnavs, NavActs, Instructions and Notices for complete details before taking action.

Alnavs apply to all Navy and Marine Corps commands: NavActs apply to all Navy commands; BuPers Instructions and Notices apply to all ships and stations.

Alnavs

No. 54—Established the value of commuted and leave rations for enlisted personnel at $1.15 per day.

Instructions

No. 1120.23A—Establishes policies and procedures by which qualified reserve officers serving on active duty may submit applications for appointment in the Medical Service Corps Reserve.

No. 1301.32—Introduces the Officer Distribution Control Report (NavPers 2627) and gives detailed instructions concerning it.

No. 1306.24B—Concerns transfer and special assignment of enlisted personnel in humanitarian or hardship cases.

No. 1500.25E (Change 1)—Lists convening dates for classes at training activities and certain schools of other services under the management of the Chief of Naval Personnel for calendar year 1959.

No. 1510.63C—Furnishes quota information on enlisted service schools, and other requirements.

No. 1510.86—Presents the procedures whereby certain non-rated personnel from the operating forces may request assignment to some Class A schools.

Notices

No. 1740 (22 Dec)—Announced changes to BuPers Inst. 1740.2 and brought up-to-date a list of state employment service offices which is an enclosure to that instruction..

No. 1306 (9 Jan)—Established eligibility for Seavey Segment Two, effective 1 Jun 1959.

No. 1741 (20 Jan)—Concerned the total disability income provision on National Service Life Insurance.

No. 1311 (26 Jan)—Explained certain organizational changes in the Bureau of Naval Personnel in connection with the subject of line officer distribution.

No. 1520 (29 Jan)—Announced selection of officers for postgraduate instruction.

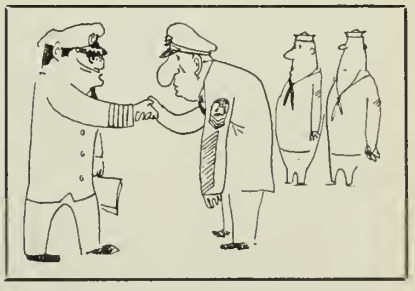
No. 1520 (11 Feb)—Invited applications from Supply Corps officers for assignment to the Freight Transportation and Traffic Management Course at the Naval School, Freight Transportation, Naval Supply Center, Oakland, Calif.

No. 1743 (16 Feb)—Concerned the granting of leave to individuals of the Jewish faith during the Passover Festival.

No. 1760 (16 Feb)—Supplemented previously issued information about deadlines for beginning and finishing education and training under the Veterans' Readjustment Assistance Act of 1952.

No. 1020 (25 Feb)—Concerned regs on metal shirt-collar devices worn by male chief petty officers.

All-Navy Cartoon Contest
Honorable Mention
J. L. Wages, CS3, USN



"Congratulations on making chief, go pick up your ulcers."

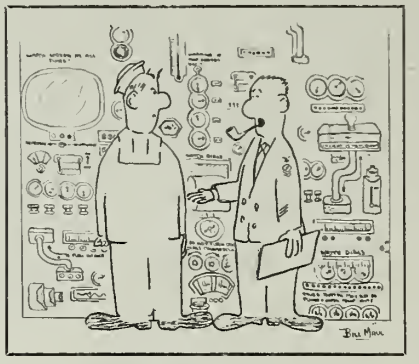
New Provisions May Be Added To Your NSLI Policy to Increase Disability Income

A new total disability income provision can now be added to your National Service Life Insurance policy that will pay you, if you become totally disabled, $10 a month for every $1000 of life insurance.

The old total disability income provision paid only $5 a month for each $1000. The new rider is available to both Korean veterans and World War II veterans. Public Law 85-678, which provided for the increased benefits, also authorized the issuance of the new provision to persons who have nonparticipating (not entitled to receive dividends) insurance issued under section 621 of the NSLI Act. These policy numbers have "RS" prefixes.

Persons who have nonparticipating insurance issued under section 620 of the NLSI Act—these policy numbers have a "RH" prefix—are not eligible for the new total disability provision.

All-Navy Cartoon Contest
Honorable Mention
W. R. Maul, CT1, USN



"Now before I leave, do you have any questions?"

If you're interested in having this new provision added to your NSLI policy, make application to the Veterans Administration, Washington 25, D.C., on either VA Form 9-1606 "Application for Total Disability Income Provision (Medical) or VA Form 9-1606A "Application for Total Disability Income Provision (Non-Medical)." See your Insurance Officer for details.

Persons who have the old $5 per $1000 rider must add the following statement to the VA Form 9-1606:

"If this application is approved, I hereby surrender the Total Disability Income Provision which is attached to my National Service Life Insurance policy or policies shown above."

Although you do not return either the policy or the rider to the Veterans Administration, the above statement is necessary before the new rider can be put into force.

If you are 40 years old, or less, you do not need to submit a physi-

Naval Historical Foundation and Truxtun-Decatur Museum

Foul weather gear was the order of the day when the Naval Historical Foundation held its annual meeting early this year. It was bitter cold; the streets of Washington, D.C., were icy. But when the trustees, members and guests had all arrived for the meeting, more chairs had to be brought in to the meeting at the Truxtun-Decatur Museum.

The museum is located at 1610 H Street. If you know the Capital, you'll also know that this address is a heaving-line toss from the White House. It's right next door to the historic Decatur House, now open as a national naval shrine.

The Naval Historical Foundation is "dedicated to the preservation of the nation's rich heritage of maritime history and tradition." It was founded in 1926. In May of 1950, the Truxtun-Decatur Museum was opened, to display historical exhibitions "devoted to seapower in all its components—Navy, Marine Corps, Coast Guard and Merchant Marine."

Although the weather was gloomy, the meeting was not. It was reported that membership was climbing steadily; the treasury was solvent and had a good balance; around 30,000 visitors had seen the recent exhibits; some valuable historical material — and scholars and writers are now busy—had been presented to the museum; many gifts had been received, including one for $12,500 from Mrs. Rieta Lanhorn Westervelt, wife of the late Captain George Conrad Westervelt, to be used for the museum library and repository.

Vice Admiral John F. Shafroth, USN (Ret.), presided, with Rear Admiral John B. Heffernan, USN (Ret.), as Secretary. Rear Admiral E. M. Eller, Director of Naval History and Curator of the Navy Department, as curator of the foundation, reported on the advances made. ALL HANDS gathered some very interesting historical facts which you'll be hearing about.

A great many distinguished guests were present. Admiral Jerauld Wright took time out from his duties as SACLANT to attend. Mrs. A. A. Burke was present, representing CNO as well as herself. Rear Admiral J. A. Furer and Commodore Dudley W. Knox, two of the guiding lights of naval history, lent their support to the meeting. (Commodore Knox was one of the founders of the Naval Historical Foundation and has been a dynamic force in it for a generation.) Among those present were representatives from the U. S. Coast Guard, Marine Corps, Merchant Marine and Navy as well as the Royal Navy.

Along with the growing interest of U. S. and foreign scholars in the historical material held by the foundation, there has been an upsurge in interest by the "man in the street." The museum is pointing toward the younger generation also, as demonstrated in such displays as a full-sized deep sea diving suit and other Navy gear.

You can get further information on the Naval Historical Foundation by writing to them, care of the Navy Department, Washington 25, D.C. Active membership is $5.00 per year. Members are currently being sent reproductions (in color) of an eye-witness drawing showing the French fleet standing out of Chesapeake Bay while the British fleet approaches—an event of the Revolutionary War.

If you have occasion to visit Washington, you should by all means "take in" the Truxtun-Decatur Museum. It's well worth your time (and admission is free).

cal examination report with your application. Instead, complete parts one and two of VA Form 9-1606 (medical) or all of VA Form 9-1606A (non-medical), and have your ship's office certify the following statement:

"I certify that the applicant is a member of the U. S. Navy. The applicant has been a member of this organization for (years and months) *and during such period has been able to perform his routine duties without substantial loss of time on account of illness or disability."*

If this is not the case give additional facts. Persons over 40 years old must submit a physical examination report with their application.

For complete details see BuPers Notice 1741 of 20 Jan 1959, which covered these changes.

Photo Contest Reminder—Deadline Is 1 May

If you're a shutterbug and have been snapping your way around the world, or have been taking pictures at home, why not enter the best of them in the 1959 All-Navy Photo Contest?

Pictures may be submitted in any or all of five categories. These include:

- *Portraits* (animals may be included).
- *Sports and other action.*
- *Military life.*
- *Scenic* (marine, industrial, architectural, etc.).
- *Experimental and abstract.*

Entries in these five categories will be further divided into two groups. Group I is for black and white photos and Group II for color transparencies.

Group I entries will include single enlarged photos which may vary from a minimum of 8 by 10 inches to a maximum of 16 by 20 inches. They must be unmounted and unmatted and may not be tinted or color-toned. Generally, negatives are not required but all prize winning or honorable mention entrants may be required to furnish negatives. Each picture entered must be accompanied by an entry form, enclosure (2) to BuPers Notice 1700 of 5 Dec 1958.

Group II entries may be up to 4 x 5 inches in size and must be enclosed in plastic envelopes or other protective covering. All transparencies should be mounted and each marked with a thumb marking spot in the lower left corner when the transparency is held for normal viewing. The name and rank or rate of the contestant, together with the title and category, must be printed on each mount.

All persons who have been on active duty for 90 days or more are eligible to enter. The rules are simple. They are:

- Any photograph which has *been taken by the contestant* since 1 Jun 1957 may be entered.
- Entries deemed unworthy of consideration or unsuitable for exhibition may be withdrawn by contest officials.
- Upon determining that an entry is not in the correct category, contest officials may either transfer or disqualify it.
- Color transparencies (Group II entries) will be returned to contestants. Although every possible effort will be made to assure safe return of entries, the Navy will not assume responsibility for loss or damage.
- Black and white pictures (Group I entries) become the property of the Department of the Navy and will not be returned to the contestant.
- A Release Form (Enclosure (2) to BuPers Notice 1700 of 5 Dec) may be used instead of a standard model release for individuals who are U. S. nationals and who are subjects of portrait photographs entered in the All-Navy Photo Contest.

Preliminary contests may be held on the district or Fleet levels as the respective naval district commandants and Fleet commanders desire, however, *all entries submitted will be forwarded to the Chief of Naval Personnel* (Attn: Pers G11) for entry in the 1959 All-Navy Photography Contest. Entries should be mailed in time to be received by the Chief of Naval Personnel by 1 May 1959. NROTC and Reserve Units are not eligible.

The Chief of Naval Personnel will present one award to each of the five categories for both Group I (black and white) and Group II (color transparency) entries. Honorable Mention certificates will go to the four runners-up in each category of both groups. No contestant may receive more than one winning award for each group. A contestant may, however, receive an honorable mention in addition to an award.

The winning entries of the 1959 All-Navy Photo Contest and other selected photos will be forwarded for entry in the Eighth Inter-Service Photography Contest being held at the Pentagon in June.

Awards for the Eighth Inter-Service Photo Contest will be presented to the first three place winners and five honorable mentions in each category of both groups. "Best of Show" awards will also be presented in each group. The Perpetual Inter-Service Photography Trophy will be awarded to the service with the most winners.

QUIZ AWEIGH ANSWERS

QUIZ AWEIGH IS ON PAGE 45

1. (c) Gaff.
2. (b) Civil Engineer Corps.
3. (a) Passageway.
4. (b) 3.2 or 3.0.
5. (b) Harbor tug.
6. (a) Indian tribes.
7. (c) Underwater.
8. (c) Blast effect.
9. (c) The President of the United States.
10. (b) John A. Dahlgren.

Now, do you think you should do a little more studying before the exam?

All-Navy Cartoon Contest
Honorable Mention
LT B. E. Lodge, USN

"Koster, I don't think you understand the function of this school."

Why No Orders to Shore Duty?

When it comes to shore duty, the Bureau of Naval Personnel maintains books and records to insure that the right man gets assigned at the right time. But there is one book that has a special meaning to the man in the Fleet. This is called the "active book." It's from this listing alone, that orders are written up for shore duty.

But if you think that once your name reaches this list you'll be guaranteed shore duty, you may find that this won't be the case. With the passing months, your name can fall by the wayside. And, practically every time, *you're* responsible. (How's that again?)

In order to get shore duty your name must be in the active book. To *keep it* in this book (until you get orders) you must maintain at least 16 months' obligated service. Why 16 months? Figure it this way. When you get orders there is usually a four-month lead time. This gives you time to get ready for the transfer and allows Fleet distributors time to get a relief on board. Then you need 12 months remaining on your current enlistment for the actual shore duty.

If, after reading this, you check and find that you have 16 months or less to do and still haven't received your shore duty orders, don't get shook. There is still a way to get your name back in the active book. You may sign an agreement to extend your enlistment (NavPers 601 page 1A) *with the proviso written in* that the extension is binding *only* if assigned to U. S. shore duty. A copy of the extension agreement will go into the works and once again your name will appear in the active book.

But, taking a broad look at the situation, keep in mind that it takes about two months from the time your extension paper is mailed and the daily diary entry made, until your new EOS can appear in the active book in the Bureau.

While on the subject of shore duty, what happens to a man who, for instance, puts in for Pensacola, Fla., and his orders come in for Great Lakes? There's a well-worn phrase that takes care of this situation called, "for the needs of the service." In plain language — he goes to Great Lakes.

This is not an indiscriminate shuffling of men into billets not of their own choosing. It works this way. You get your first choice if you're high enough on the active book *provided* there is a billet opening. If it's already filled, you don't get it. The same for your second choice. But, if your name appears on the active book and your rating is needed somewhere else, that's where the Navy will assign you.

Helping Hands

Within one 15-day period not so long ago Navymen came to the aid of flood victims in northern Morocco, fought fire on a Panamanian tanker in Turkey and rushed relief supplies to a burned-out Japanese city in the Ryukyu Islands.

• In Morocco, a Navy helicopter from Port Lyautey Naval Air Station evacuated homeless farm families from the Ouegra and Sebou River areas during the worst floods there in 18 years. Communications with the area, 15 miles wide and 40 miles long, were completely disrupted.

Besides evacuating hundreds of the homeless, the Navy distributed food and clothing to them from its supplies and, in answer to a radio appeal, Navymen and their families made additional donations.

• At Iskenderun, Turkey, USS *John R. Pierce* (DD 753) came to the aid of the scorched and half-flooded Panamanian tanker, ss *Mirador,* which has been set afire in an explosion while pumping jet fuel to the MSTS tanker, USNS *Oklawaha. Oklawaha,* also badly damaged, immediately cast off and anchored. Three lives were lost—two on board *Mirador* and one on *Oklawaha.*

Pierce, which was anchored at Rhodes, Greece, when the blast occurred, was ordered to Iskenderun.

By then, the tanker was far down by the stern and her bow was tilted sharply upward.

An advance damage control party of *Pierce* officers and men boarded the tanker from a small boat to handle *Pierce's* mooring lines and investigate the situation. Soon fire-fighting gear was passed from *Pierce's* forecastle to the fire and rescue party on the tanker.

All-Navy Caroon Contest
Honorable Mention
J. E. Daniel, SFCA, USN

"The Captain wants this messdeck scuttlebutt stopped immediately. But first — Ah, what's the . . . er . . . ETA?

Within an hour after boarding, the destroyermen had the fire under control. However, although no flames were visible above the main deck, three teams of *Pierce* firefighters were kept busy until late the next afternoon, battling isolated flames in various tanks and engineering spaces throughout the tanker's after section. Meanwhile, working parties from *Pierce* kept gear and supplies flowing to the fire fighters.

Finally, when only a small smoldering in the tanker's refrigerator insulation remained unextinguished, *Pierce* pulled away to a fueling buoy to replenish the oil she had burned in her high-speed run from Rhodes. Next morning she went back alongside *Mirador* to start pumping the water out of the tanker's stern section, using a pump provided by the Turkish navy, plus her own pumps and ejectors.

• Disaster in the Ryukyus hit the city of Koniya, on Amami Oshima. Nearly 6000 people were left homeless by a fire which destroyed almost half the city.

Upon hearing a press report of the tragedy, VADM Frederick N. Kivette, Commander of the Seventh Fleet, ordered his Antisubmarine Task Group, led by USS *Yorktown*

(CVS 10), to proceed at best speed to render "medical and humanitarian assistance."

Before 0700 the next morning *Yorktown* was on the scene, along with *Picking* (DD 685), *Fechteler* (DDD 870), *Preston* (DD 795), *Jenkins* (DDE 447), *Taylor* (DDE 468), *Walker* (DDE 517) and *John S. McCain* (DL 3). They found over 1500 homes destroyed and immediately began landing medical supplies, clothing, bedding and tents.

In response to a plea from the Mayor of Koniya, the ships landed 30,000 rations—enough to feed the 6000 homeless for five days. The food included potatoes, canned meats, milk, sugar, flour and beans.

The warships stayed on hand until Japanese Red Cross and Maritime Safety Board rescue forces began arriving from the main Japanese islands. Then, they quietly slipped out of the harbor and back to their Western Pacific vigil.

The Seventh Fleet's action drew "well dones" from several quarters —among them the U. S. Ambassador to Japan, Douglas MacArthur II, and Japanese Foreign Minister Fujiyama.

The message from the Ambassador stated in part:

"Your immediate response to the disaster which has overtaken Amami Oshima is in the finest traditions of the Navy and the Seventh Fleet, and I am grateful to you and all the officers and men of Task Group 70.4 whom you have despatched to Amami Oshima to assist in the work of rendering assistance and relief. Your action has been received with deep appreciation by our Japanese friends, who regard it as another fine example of humanitarian actions undertaken by our armed forces in keeping with the spirit of partnership and enduring friendship which unites Japan and the United States.

"My own task, as you know, is to work for closer friendship and cooperation between Japan and the United States. Your timely action has greatly contributed to this task, and I am grateful to you."

Foreign Minister Fujiyama expressed his appreciation in this letter to Ambassador MacArthur:

"I am informed that a great amount of relief supplies has been dispatched by the naval forces of the U. S. government to relieve the victims of a recent conflagration at Koniya, Amami-Oshima, and, on behalf of the stricken people and the government of Japan, I hasten to express to Your Excellency and the naval forces concerned my deep appreciation for such generous action."

Tropical Medicine Is Subject Of New Correspondence Course

The Medical Department correspondence course, ***Tropical Medicine In the Field*** (NavPers 10995), is now available to USN and USNR officers and enlisted personnel. The course provides a concise guide to physicians practicing medicine in the tropics and temperate zones.

The course consists of twelve assignments evaluated at thirty-six points credit for purposes of Naval Reserve retirement and promotion. Applications should be made on form NavPers 992 (Rev. 10/54 or later), with appropriate change in the "To" line, forwarded via official channels to the Commanding Officer, U.S. Naval Medical School, National Naval Medical Center, Bethesda 14, Maryland (Attn: Correspondence Training Division).

WHAT'S IN A NAME

New York Naval Shipyard

A shipyard is like a mother. Here ships are born, and get their first start. Typical of the yards is New York Naval Shipyard, which has mothered a large family—a family that has become quite prominent in the Navy.

Some members of the family have passed on, for, after all, the first was born back in 1817. The ship was the 74-gun frigate *Ohio*. At birth she was considered a real beauty. As late as 1879 she was still in use as a receiving ship in Boston. In 1883 she was sold.

When the Civil War came along, NYNS was on the job bringing new ships into the world to help the war effort. Sixteen fighting ships were born during that conflict. Besides these, NYNS completely converted and outfitted 416 commercial ships for war.

One of this shipyard's most famous offspring was USS *Maine*. Although she met a tragic death, at the time she was built she was so big that the launching ways had to be reconstructed. This battleship weighed 6682 tons and carried 10 guns in her main battery.

More battleships, including the USS *New York* (BB 34), *Arizona* (BB 39), *New Mexico*, (BB 40), and *Tennessee* (BB 43) joined the family for World War I. These four battlewagons were still around for World War II. As you remember, *Arizona* lost her life at Pearl Harbor.

But, like a good mother, NYNS continued her work. During World War II the battleships USS *North Carolina*, *Iowa* and *Missouri*, and the aircraft carriers USS Bennington, Bon *Homme Richard*, *Kearsarge* and *Franklin D. Roosevelt* were born.

NYNS doesn't limit her care to her own brood. From 7 Dec 1941 to the end of World War II she repaired over 5000 ships and converted some 250 others. She was the first Naval Shipyard in the country to receive the Navy "E" for excellence in work performed during World War II. The award was renewed six times.

As years pass, this shipyard's offspring seem to get larger and larger. On 16 Dec 1952, the keel of the largest ship ever built at the New York Yard was laid. It was for the 60,000-ton attack carrier USS Sarotoga (CVA 60).

A second giant carrier has just been commissioned at New York. USS *Independence* (CVA 62), was commissioned on 10 January this year. And this isn't the last. The shipyard has been assigned another *Forrestol*-class carrier; the keel of *Constellation* (CVA 64), was laid in September 1957. She should be launched in 1960 and commissioned in 1961.

Over the years, there have been a few changes at NYNS. Originally a 42-acre crescent-shaped piece of land, she was bought by the Navy in 1801 for $40,000. Today she covers more than 290 acres, has 270 major buildings, 19 miles of paved streets, 30 miles of railroad tracks, and is considered one of the largest industrial plants in the state of New York.

Mother, how you have grown!

Three Scholarships Available to Navy Juniors Through BuPers

Scholarships have meant the difference between attending college or not attending for the children of quite a few Navymen. Today, scholarships are still available to help students who want to learn. Some of these grants are well-known, while others are not.

Among the not-so-well-known ones are three supervised by the Chief of Naval Personnel. In addition to scholarships, other forms of assistance are available to students from Navy families. Many secondary schools and some colleges and universities, quietly and without publicity, make substantial financial concessions to sons and daughters of Navy and Marine Corps personnel. The concessions are usually based on evidence of financial need, but may be dependent on scholastic records, character and qualities of leadership.

The three grants supervised by the Chief of Naval Personnel are:

• *The Clausey Medal of Honor Scholarship*—This provides assistance to a child of an officer or enlisted man of the Navy or Marine Corps who was killed in action, who died, or who is disabled, as a result of wounds received in actual combat. The grant, to be used in or beyond the college level, will not exceed $500. It may go to one person or to more than one, at the discretion of the selection committee. Anyone receiving assistance from another established scholarship is not eligible.

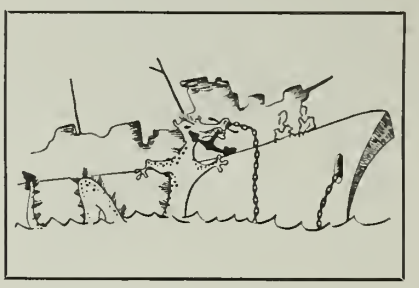
• *Navy Wives Clubs of America Scholarship* — Established by the Navy Wives Clubs of America, this program makes annual scholarship awards of at least $300 per academic year to children of enlisted men. The outright grant must be used in obtaining a college education, or vocational, business or other training. The applicant for this award must be the child, legally adopted child or step-child of an enlisted member of the Navy, Marine Corps or Coast Guard on active duty, retired with pay or deceased. The number and actual value of the annual awards varies.

• *Naval Academy Women's Club Scholarship* — The Naval Academy Women's Club awards a four-year scholarship annually in the amount of $300. The recipient must be the daughter or step-daughter of a Naval Academy faculty member, or of a regular Navy or Marine Corps officer on active duty, in a retired status or deceased.

Application forms for the above scholarships, or information about others offered to sons and daughters of Navy or Marine Corps personnel, may be obtained from the Chief of Naval Personnel (Attn: Pers G221). When requesting application forms, specify the scholarship for which it is intended to compete.

Some application forms are also available elsewhere. Mrs. Jeanne Tourville, 9 Windlass Green S.W., Washington, D.C., or the secretary of any Navy Wives Club, has application forms for the Navy Wives Clubs of America Scholarship, and Mrs. Perley M. Clark, 102 Conduit St., Annapolis, Md., has forms for the Naval Academy Women's Club scholarship. All forms, however, must be returned to the Chief of Naval Personnel (Attn: Pers G221). Applicants must fill out the forms completely and include all the information requested. They should also make sure that schools forward transcripts and letters of recommendation, if requested, before the deadline set for each fund. Incomplete applications are disqualified.

All-Navy Cartoon Contest
Honorable Mention
J. E. Cornish, AT3, USN



"If you'll tell the Chief what it is, I'll tell him what it's doing."

Warrant Officer Appointments Go to 45 CPOs and PO1s

Thirteen first class and 32 chief petty officers have been issued temporary appointments to Warrant Officer, W-1.

These appointments are from an eligibility list established by a selection board convened in February 1958.

Regular Navy appointments were broken down into the following designators: Boatswain (7132), one; Aviation Ordnance Technician (7212), one; Surface Ordnance Technician (7232), six; Ordnance Control Technician (7242), one; Machinist (7432), eight; Electrician (7542), seven; Electronics Technician (7662), five; Ship's Clerk (7822), one; Supply Clerk (7982), 10; Medical Service Warrant (8172), four; Aerographer (8212), one.

Here's Reason Why Those Courses Never Arrived

The Correspondence Course Center at Scotia, N. Y., reports that more than five per cent of all applications for courses are impossible to process. Why? Because the applications have been filled out improperly.

Remember to place the name and address of the command receiving the course on both the label and endorsement parts of the form. Also bear in mind that both the course title and the NavPers number must be indicated on the application.

If you sent in your application a couple of months ago and still haven't received the course, some of the fault might be your own.

Officers Wives Club Offers Scholarship to Navy Junior

The Navy Officers Wives Club at Bainbridge, Md., will award a $250 annual college scholarship award to a dependent of a Navyman (enlisted or officer) on active duty in, or retired from, the regular Navy or Marine Corps, or to an heir of one who has died in the line of duty or after retirement from the Navy or Marines.

The grant will be given for the academic years 1959-60, 1960-61, and 1961-62 on the basis of need, scholastic standing, character and leadership.

To be eligible, the applicant must be a graduate or prospective graduate of an accredited high school or its equivalent. A student already attending college is also eligible. All else being equal, preference will be given to an applicant whose parents

are or have been stationed at the USNTC, Bainbridge.

The scholarship must be used for the educational expenses of the recipient at an accredited college or university. The grant may be renewed at the discretion of the selection board, but only after a new application has been made.

Application forms are available from all naval district headquarters or the Bureau of Naval Personnel (Pers-G221), Washington 25, D.C. These must be completed and submitted to the Bainbridge Officers Wives Club no later than 21 March. The Club's selection will be announced in May.

Increased Weight Allowances On HHE for Top CPO Grades

Senior and master chief petty officers can ship more household goods than any other enlisted grades as a result of a new change to Joint Travel Regulations establishing weight allowance for the new E-8 and E-9 pay grades.

The allowances give Senior Chief Petty Officers (E-8) an allowance of 6500 pounds on permanent change of stations and 500 pounds for a temporary move. Master Chief Petty Officers in Pay Grade E-9 will be able to ship 7000 pounds on a permanent change of station and 600 pounds under temporary orders. These new allowances compare with the present CPO (E-7) allowance of 6000 pounds for a permanent move and 400 pounds on temporary duty orders.

The newly established allowances became effective on 1 Feb 1959 and were in Change 77, paragraph 8001, *Joint Travel Regulations.*

They're Real Pros at Electrician Mate's School

The manager of any baseball team would be mighty happy to have his club bat .333 for the season. And he'd probably flip his wig if the team average was any higher.

So, you can imagine the celebration that went on at the Electrician Mate's Class "A" School in San Diego when the results were announced as to who would receive pro pay. The school batted 100 per cent or—in baseball parlance—1.000.

Nineteen instructors at the EM school took the examination for pro pay last November and all 19 passed with flying colors. The men, all EMIs, started to collect their extra 30 dollars in January.

Three Bombing Records Claimed In AirLant Competition

Attack Squadron 176, based at NAS Jacksonville, has established what it believes to be three All-Navy bombing records during the AirLant Glide Bombing Competition held at NAS McCalla Field, Guantanamo Bay, Cuba.

"Thunderbolt" pilots and crews combined their talents to record what may well be the finest glide-, loft- and night-bombing competitive exercises ever fired. During the two-week exercise VA-176 earned 64 out of a possible 74 "E" Awards.

In the day-glide-bombing competition the Thunderbolts wasted no time in finding the mark and finished the meet with a sensational squadron average of 37 feet. Of the 25 pilots who participated in this phase, 18 of them posted scores averaging less than 50 feet for three bombs, thereby earning the "E" for this event.

LTJG Nelson Segars and LTJG Dick Lubberstedt both dropped three bull's eyes for an average score of "0" feet. One of the squadron's officers was overheard citing a legitimate complaint—"Fire a good score and be beaten twice!" He had a five-foot average for three bombs.

To earn an "E" in the night dive-bombing an average of 100 feet or less is required. In this phase of competition, VA-176 pilots found the mark again and shattered records when 21 of the 24 competing pilots posted "E" scores and a squadron average of 67 feet was established. LT. Al Headly paced the pack in the night meet with a 10-foot average.

In the loft-bombing exercise the Thunderbolts registered a clean sweep. All 25 VA-176 pilots earned an "E" with a squadron average of 121 feet. The requirement for an "E" in the loft event is 250-feet for a single bomb. It is believed this is the first time that this type squadron has ever posted 100 per cent in a loft-bombing exercise.

HERE'S YOUR NAVY

The last 10-year period has proved to be one of the most revolutionary in the history of naval armament. That decade saw the passing of the era of the gun and the advent of the age of the missile. This progress is reflected by the work accomplished by the men and machines at the Naval Ordnance Laboratory at White Oak, Md.

Located on an 876-acre tract, NOL's physical plant, which includes 150 buildings, has a replacement value of over $50 million, with equipment worth at least another $10 million. It is manned by about 3000 civilian and military personnel, including more than 1000 scientists and engineers.

On 27 Jun 1949 a large Aeroballistic Research Center with supersonic wind tunnels and ballistic ranges was

dedicated. These facilities have been improved and enlarged. Another major addition, dedicated 23 Mar 1950, was the Ordnance Environmental Laboratory. In 1956 a huge moored mine and antisubmarine weapons-testing tank was completed.

Along with the growth of its physical plant and the increased skills of its personnel, the number and difficulty of the Lab's tasks have grown.

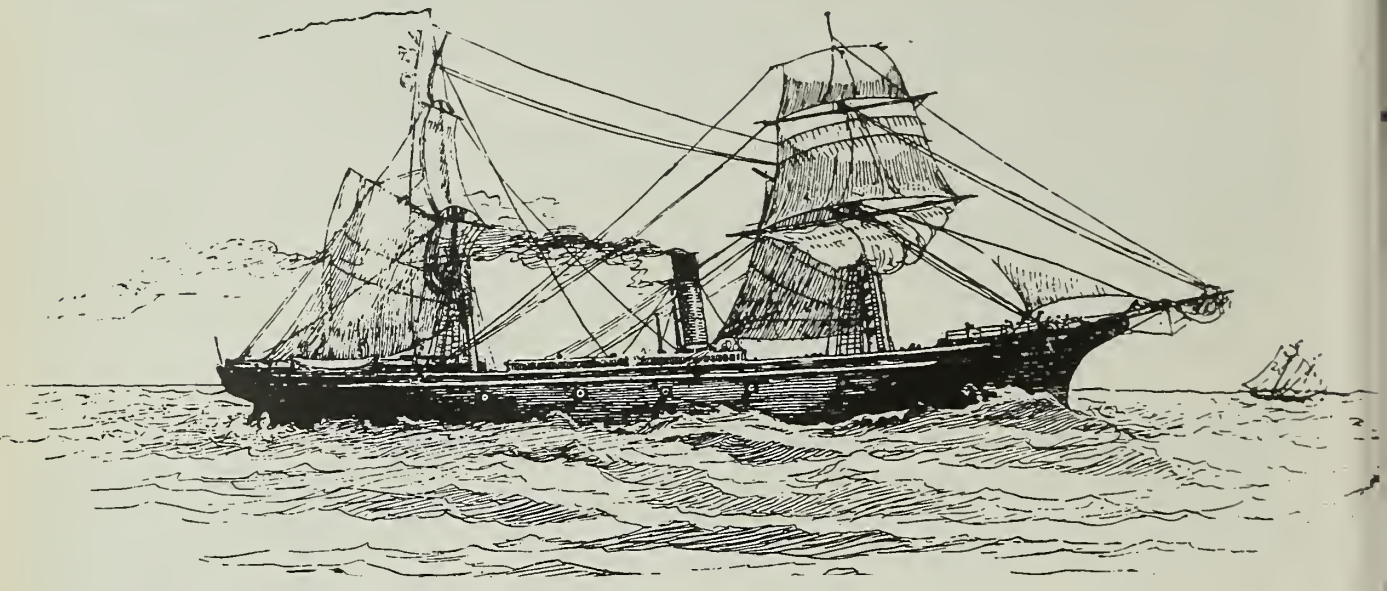
Task assignments from the Bureau of Ordnance include pure research, development research, design and weapon evaluation involving problems in physics, chemistry and mechanical, electrical and electronic engineering.

Much of the Laboratory's work is done through performance contracts with private industrial and research organizations to the extent of several million dollars. In addition it receives technical support from field testing and research facilities at Ft. Lauderdale, Fla.; Solomons, Md.; Ft. Monroe, Va.; and Brighton Dam, Md.

In developing naval ordnance, NOL scientists often find new ideas that have direct civilian application. Changes in electronics, for instance, are expected from a new detecting device called solion. Then there is the magnetometer adapted to locate new oil deposits, and new metals.

These are but a few. It could be said that NOL is a house Navy has built for the production of ideas.

Confederate Commerce Destroyers



The Confederate Navy's "commerce-destroyers" played a courageous role in the battles of the Civil War. The South recognized the importance of keeping open its communications with the outside world, and recognized also the weight that economic factors would carry in the ultimate course of war. That was the reason for the commerce-destroyers, of which Georgia *was a good example.*

James Morris Morgan, a Confederate "reefer" (slang term for midshipman), saw a great deal of the sea war between the South and the North. Formerly enrolled in the Naval Academy at Annapolis, he left to fight for the South. His ship was in the battle of New Orleans against the Fleet of Admiral Farragut; later he ran through the Union blockade to Bermuda. From there he sailed to Europe to join the crew of Commodore Matthew Maury in the Confederate cruiser Georgia, *which made a name for itself by capturing many ships in Atlantic waters.*

The following account of life in Georgia *is excerpted from Morgan's personal report appearing in an article on Confederate Commerce-Destroyers appearing in the* Century Magazine *in 1898.*

IN THE WINTER of 1863-64 I was the only midshipman on the Confederate cruiser *Georgia.* My rank did not allow me to seek companionship among the crew, nor did it permit of my associating on terms of equality with the lieutenants. We first joined the *Georgia* off Ushant Island, on the coast of France, after having been tossed about in the English Channel in a small tugboat during a terrific gale which lasted for three days.

We hoisted our guns and ammunition on board the new cruiser, and raised the Confederate flag; and then we met with our first disappointment: The crew we had brought out refused to go in the vessel, with the exception of barely a sufficient number to venture to sea with.

However, we rectified this difficulty in a few days by capturing a big prize, the *Dictator* of New York, and shipping nearly her entire crew. We burned the *Dictator,* and proceeded to the Cape Verde Islands, where we came near running into the hands of a United States man-of-war which was riding peaceably at anchor within the harbor. We turned suddenly, and ran around the island, and waited for the man-of-war to go to sea in search of us. I am glad to say that we never saw her again.

We then went to the port of Bahia in Brazil, where we met the *Alabama,* and I had a good time with the numerous midshipmen on board. The *Georgia* then cruised down the Brazilian coast as far as Rio de Janeiro, off which port we captured the *George Griswold,* dangerously near the tabooed marine league.

We then steered out into the Atlantic, and captured and burned several vessels. The captain of one of them, the *Good Hope,* had died on the voyage, and his crew had preserved his body. Captain Maury of the *Georgia* had the remains brought on board his ship, wrapped the rude coffin in the United States flag, read the Episcopal service for the burial of the dead at sea, and committed the body to the deep.

WHILE THIS RELIGIOUS ceremony was going on, the *Good Hope,* a few hundred yards away, with all sail set, was one mass of flames from her trucks to her keelson, and two white sea-birds were circling around the main-truck of the *Georgia.*

I was in charge of the deck while the ceremony was going on, and the lookout reported to me that a sail on the starboard bow was bearing down upon us very

rapidly. I noiselessly stationed myself behind our captain, and informed him of the fact. He paid no attention to me, and I felt very uneasy; but the moment the coffin splashed into the waves he showed that he had heard me, for his next words were: "Beat to quarters, sir!"

We went to our guns, and awaited the stranger, who came close up, hove to, and lowered a boat. Soon the captain came on board the *Georgia.* His first words as he stepped over the side were: "Can I be of any assistance? How did she catch fire?"

Poor fellow! He thought the blaze was accidental, and had headed for the burning ship to offer assistance. His vessel proved to be the American bark *Seaver.* He explained that he had been for a long time in the Pacific Ocean, and was ignorant of the fact that civil war was raging at home. Under the circumstances, Captain Maury decided not to burn him. Our prisoners were put on board of his vessel, and he went on his way rejoicing.

It was in these seas that one night, during a gale of wind, we came near having a collision with the United States frigate *Niagara.* She passed so close to us that you might have thrown the usual biscuit aboard. It was well for the tempers of the officers of the *Niagara,* as well as for our own nerves, that neither of us knew the name of the other ship until the "cruel war was over."

WE NEXT FOUND OURSELVES at the barren island of Trinidad. This lonely spot is generally sighted by vessels, who approach it to see if their chronometers need correcting after a long sea-voyage. We lay hidden under the shadow of the Sugar Loaf, a natural monument which rises out of the sea alongside the island to the height of 1200 feet. We lay at anchor here for some time, and made two prizes, one of which we burned, after taking enough coal to replenish our bunkers.

The first intimation that passing vessels would have of our proximity would be a shot skipping across their bows as a signal that we desired them to stop. We then sailed for the Cape of Good Hope, and arrived at Simon's Town to find the *Alabama* had sailed a few hours before.

Some of the lieutenants of our ship made up a jolly party, and visited the city of Cape Town. When they returned I was given my liberty for a few days. What to do with it, I had not the slightest idea; so I hired a horse, and rode across the unknown country between Simon's Town and Cape Town.

At last I arrived at Cape Town, hungering for human society. At the hotel, after performing my ablutions, I was shown into the dining-room. I thought, on seeing the crowd of people, "Here, at all events, is company who won't object to my rank." I was wrong. There was company, and very interesting company at that! But on my entrance several of them arose, and flying oaths made the air of the place sultry. I could hear above the din one particular voice swearing that he would never eat the same table with a pirate! These words were not accurate, as he had eaten at the same table with me for three weeks while he was a prisoner on the *Georgia.*

Midshipman Morgan

IT SEEMS THAT the hotel was full of ship-captains whose vessels had been destroyed by the Confederate cruisers. For a moment it looked as if they were going to assault me. I was armed, and, true to the instincts of my native land, I got the "drop" on them. The proprietor was horrified. He rushed between us, and begged me to accompany him. I complied. He invited me into his private apartments, where I dined with his wife and daughters.

Here, at last, was society more congenial than that of the Yankee skippers. Since I have become older I have often felt grateful to that inn-keeper for taking me out of the room in time; for I have been told that a British jury would not have looked upon a man who shot down another with the same favor that I might have expected in my native state.

The next day I returned over the weary road to Simon's Town, and rejoined my ship in high spirits. While we were calking decks and taking provisions on board, Her Majesty's troop-ship *Himalaya* entered the harbor. There was a British regiment on board, bound for the East Indies. They took the greatest interest in the "pirate," and some of the officers invited the little "secesh" midshipman, as they called me, to dine on board of their huge ship.

It was a red-letter day with me, and I enjoyed my visit immensely, as they made much of me; and when they were leaving port the soldiers cheered our ship. We manned the rigging and returned the compliment with three times three.

We put to sea a few days afterward, and cruised to the southward a short distance, where we met the tea fleet coming from the East. By this move we missed running into the United States ship *Vanderbilt,* which was hunting for us. When we turned to the north with the fleet, and while going from one vessel to another inquiring of them their nationality, we came under the shadow of Table Mountain late in the afternoon, and saw the *Vanderbilt* on the horizon, steaming for Table Bay. We did not molest her, but satisfied ourselves with making a prize of the merchant ship *John Watt.* The *Vanderbilt* was six times as large as the *Georgia,* and carried 12 eleven-inch guns, whereas the *Georgia* carried only five little pop-guns, the largest being a five-inch rifle.

NIGHT AFTER NIGHT, as we continued on our course to the north, the sea was illumined with phosphorescent lights. Grass was growing upon our hull, some of it being six inches long, reducing the speed of the ship to five or six knots under steam at her best.

We next entered the port of Santa Cruz in the Canary Islands, famed among sailors as the place where Nelson lost his arm. The governor kindly permitted us to coal ship and buy fresh provisions, and after a pleasant rest

of three days we went on our way. A Federal man-of-war had left this port a few days before we entered it.

We now steered north, evidently seeking a dry-dock, of the services of which we stood in much need, as the ship could hardly drag herself through the water. One day, during a calm, we captured the *Bold Hunter,* loaded with coal. We tried to replenish our stock from her, but, the wind rising, the sea became too high, and we recalled our prize crew, who before returning fired the ship.

The officer of the deck on the *Georgia,* through carelessness, allowed his vessel to drift too near the burning prize, which was forging ahead under all sail, with no one aboard to control her movements. Seeing a collision imminent, he pulled the engine-bell to go ahead at full speed. As the engine started there was a crash in the engine-room, and we knew that the usual accident had happened—namely, that the wooden cogs which turned the shaft had broken. In an instant the *Bold Hunter* was upon us. She rose on a high sea, and came down on our rail, smashing boat-davits and boats. She recoiled, and rushed at us again like a mad bull. This time, plunging from the top of a huge wave, she came down on our taffrail, doing much damage. It now looked as though the cruise of the *Georgia* was about to end, but the *Bold Hunter* suddenly sheered off and passed to leeward of us.

While the engineers were repairing our engines we calmly gazed upon our late antagonist, the fires seething in her vitals and leaping up her beautiful white sails to her mastheads, and then running down her tarry rigging to her body again. She rolled and plunged and seemed to writhe in mortal agony until relief came in one deep dive, and she disappeared. Never had a ship without a crew made a more desperate attack on her tormentor.

HAVING FINISHED OUR REPAIRS, we proceeded on our way toward the English Channel.

The next day we had an exciting encounter with a Frenchman—the bark *La Patrie* of Marseilles. We overhauled her when there was barely sufficient air stirring to fill her sails. This was the only kind of weather in which we could catch anything, so foul had the hull of the *Georgia* become by our long stay in tropical waters.

When ordered to heave to, the Gual refused, saying he was a "Frenchman, and would not stop for a pirate," adding that we were *canaille.*

The insolence of the reply did not ruffle the gentle temper of Captain Maury. "Oh, he will stop," he said. "I have observed that Frenchmen like theatricals, but they don't mean any harm." He then ordered a boat lowered, and, turning to me, gave me my instructions as boarding officer. "Board her, sir," he said, "and tell her captain that you only want to see his papers. If they are correct, we do not wish to molest him; but if he is an American masquerading under the French flag, with a Frenchman on deck to deceive us, I will blow him out of the water if he does not swing his mainyard immediately. Use no force, sir."

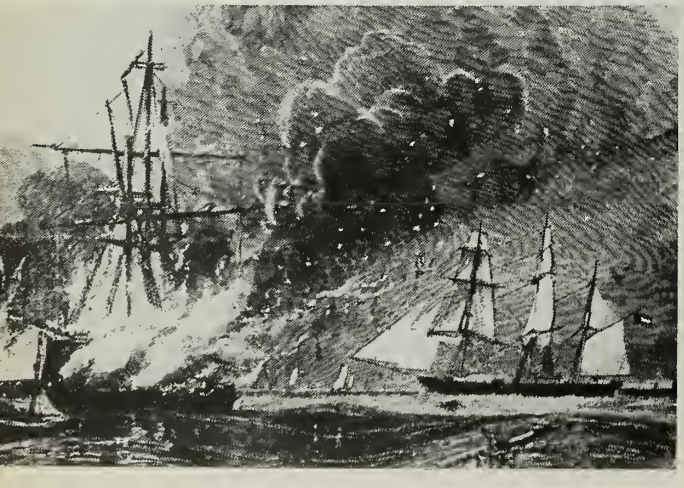
With an unarmed boat's crew, I went alongside the stranger. Her captain stood in the weather gangway, holding an old sword in his right hand, which he menacingly flourished as he forbade me to attempt to board. His crew were behind him, two of them having guns, the rest being armed with handspikes and various other harmless-looking implements, such as marlinespikes, but deadly weapons, in reality, when in the hands of sailors.

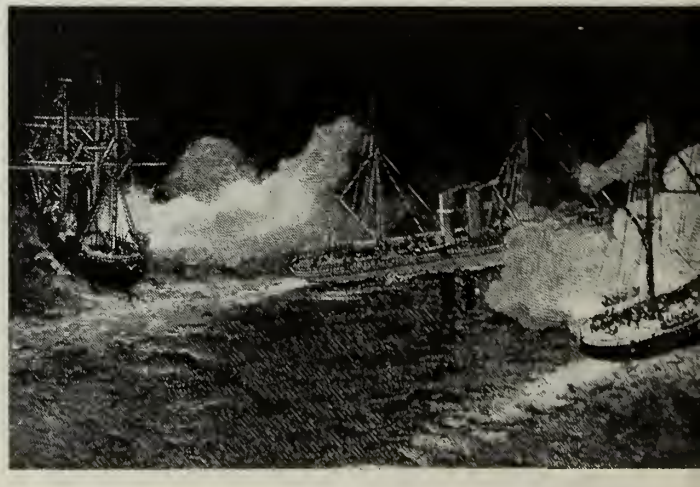
I returned to the *Georgia,* and reported the manner of my reception. Our first lieutenant now joined me in the boat, and the crew was armed. We went back to the infuriated Frenchman, but met with no better success. We were anxious to avoid using force, as we were bound to a French port; but this defiance of our rights as a belligerent was too much to be patiently borne.

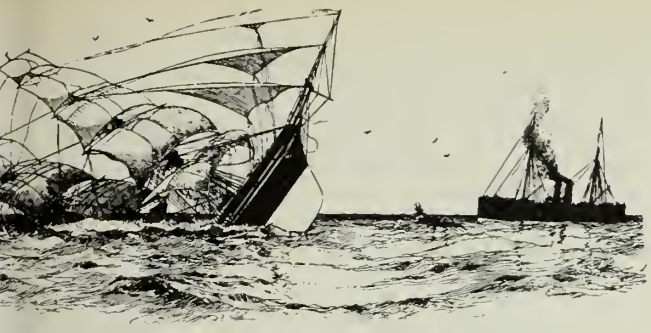
Again returning to the cruiser, we "beat to quarters," and fired a blank cartridge, with no apparent result. We then fired a solid shot across his bow. The Frenchman still defied us. As the *Georgia* swung round, our captain, scarcely allowing room enough for the stern-chasers to miss our adversary, ordered me to fire. The shot struck the water a few inches from his cutwater, covering his forecastle with spray. In my nautical experience I never before or since saw a maintopsail thrown aback so suddenly.

We again entered the boat, this time boarding *La Patrie* without waiting for an invitation. As interpreter, I demanded to see the ship's papers. Her captain replied that we would have to use force. "Ask him," said our lieutenant, "if he wants me to knock him down. I am tired of this nonsense. If he does not show his papers in two minutes, I will fire his ship." The skipper said he wanted the lieutenant only to lay his finger on his coatsleeve—that would be sufficient. The lieutenant complied with his request, and the Frenchman led the way into his cabin. With a courtly bow he remarked, *"Ici*

CONFEDERATE commerce destroyers sank many ships headed for northern U. S. ports, evaded Union warships.







DOWN SHE GOES—Confederate sends another to bottom.

nous sommes des messieurs," produced his papers, which were all correct, and opened a bottle of champagne to celebrate the occasion.

This incident was afterward made the subject of a dimplomatic correspondence between the Emperor's government and Mr. Slidell.

Shortly after these adventures, on a dark night we entered the artificial fortress harbor of Cherbourg. When day broke we were greeted by a grand view of the French ironclad fleet anchored on our starboard beam in two long lines between us and the forts on the breakwater.

We had been here only a few days when a fearful storm burst upon us in the night. A wooden line-of-battle ship dragged her anchors and came down upon us. She held her ground only a few fathoms away.

All that night we watched her anxiously, praying that those cables would not part. When day broke it was a grand sight to see the huge ironclads pitching bows under to every sea. Later in the day it was heartbreaking to witness the efforts of the fisher-boats struggling in from the Channel, missing the narrow entrance to the port, and go smashing upon the rocks. One fellow made such a gallant struggle for life that the French flag-ship *La Couronne* cut loose a launch containing 20 men and a young lieutenant, which had been towing astern, and they rowed to the rescue of the fishermen, whose craft went tumbling upon the rocks of destruction before the assistance arrived. And then the launch followed, being smashed like an egg-shell, her heroic crew perishing.

WHEN THE ELEMENTS QUIETED down, the bodies were picked up, and there was a grand funeral. We poor "pirates" were invited to attend, and we saw a rare pageant. The bodies were placed on light-artillery gun-carriages, the coffins being draped with the national colors. Soldiers and marines lined the avenue from the dock-yard to the cemetery. A large number of priests, followed by bands of music, preceded the cortege. Then came the biers, followed by admirals and other officers, according to rank. We were placed just after the admirals. Then came the crew of the *Couronne,* numbering 600 men, followed by the ship's companies of the rest of the fleet.

Upon arriving at the cemetery, the bodies of the sailors were first lowered into one big grave. They were to abide together in death, as they had lived and suffered together in life. The officer had a separate grave. Just as his body was being lowered into it, a gorgeous aide-de-camp on a grand charger dashed up and called a halt. He saluted the ranking admiral, and handed him a package and an official communication. The packet contained the cross of the Legion of Honor. The communication was an order from the Emperor to pin it on the breast of the young man. The coffin was opened, the order obeyed. The officers and sailors drew to one side; then battery after battery of flying artillery dashed up, and fired a salvo over the graves.

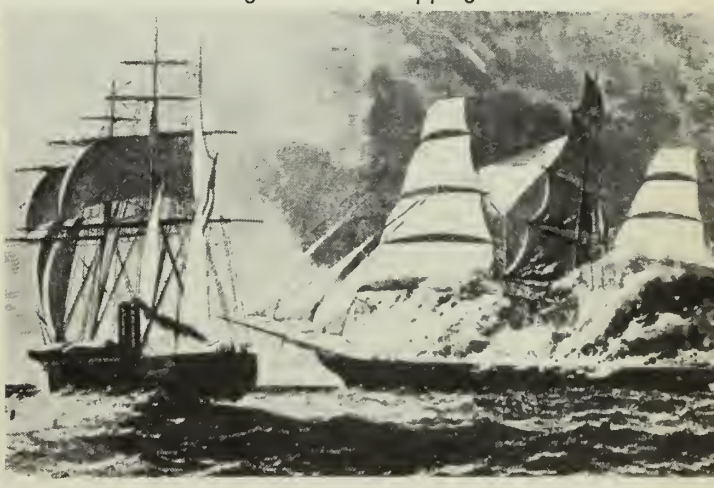
It was a grand sight. You may say that it was theatrical, that everything was timed, and all had been prepared beforehand. Supposing it was, what young officer with blood in his veins but would gladly give his life to serve a country that would make him the central figure of such a *coup de theatre,* even though it was only his dead body which received the ovation?

AFTER WAITING many weary weeks in Cherbourg, the *Georgia* was finally given permission to enter the government dock and be overhauled and repainted. I was granted leave for a few days to visit friends in England; for although a solitary midshipman on the *Georgia,* I had some friends in various corners of the earth.

I stopped in Calais to see some old classmates of my Annapolis days, who were attached to the Confederate steamer *Rappahannock,* which was lying in that harbor. She was a condemned English gunboat, and had been bought at auction by a Confederate agent, and then stolen from an English port by a Southern naval officer, and run into Calais to be fitted out.

After paying my visit to England, I returned to the

IN COMPARISON to her small size Georgia made a big wartime haul attacking Northern shipping in Atlantic.



Georgia, where I found that all was hurry and excitement. Something was about to occur—no one knew what, but all hands were on the qui vive. Our old captain had been detached; our new captain was our former first watch officer, a man under 30 years of age; our new executive was our former navigator, a man of 23; and the additional new lieutenants were still younger men.

The *Kearsarge* was outside waiting for us. One dark night we took up our anchor and slipped out. Morning found us well down the English Channel, surrounded by steamers and sailing-craft, but paying attention to none. Out into the Atlantic we sped, away from the haunts of men.

One day, when it was getting very lonely, the masthead lookout broke the monotony by singing out, "Sail ho!"

"Where away?" asked the officer of the deck.

"Two points off the starboard bow, sir," came the reply.

I reported the sail to the captain, who was busy over a chart; I also explained that the strange sail had long skysail poles, which was a never-failing sign of a Yankee. When I had finished, without looking up, he simply said: "Tell the officer of the deck, sir, to hold his course."

I was dumbfounded, and when I repeated the message, something that sounded like a very low whistle came from the officer. Onward we flew, under steam and sail, as though we were afraid of being too late for something.

At last the welcome cry of "Land ho!" came from the masthead, and we were soon anchored in the open ocean, about two miles from the land.

"Where are we now?" I heard a lieutenant ask the navigator.

"Off the coast of Morocco, about 30 miles south of Mogador," was the reply.

Day after day we rolled and tugged at our anchor, the monotony being broken only by the sight of an occasional caravan coming out of the desert, winding its way along the beach for a short distance, and then disappearing behind the mountains, which come down to the sea at this point.

Our young captain became restless and uneasy; he spent most of his time nervously pacing the quarter-deck: and at last, the strain becoming too great to be borne alone, he informed his officers that he was waiting for the *Rappahannock,* to give her our battery, as the Confederate naval authorities in Paris had decided to put the *Georgia* out of commission, as she was not fitted for the service. The *Rappahannock* was long overdue at the rendezvous, and our captain was at a loss what to do.

SOME OF THE OFFICERS were smoking near the gangway when I remarked to one of them that I had seen the *Rappahannock* at Calais. The captain overheard me. "What's that, sir? What did she look like? What do you know about her?"

"I know that she is a dilapidated old craft, and the midshipmen said that she was hogged, or had broken her back, by resting on the bottom at low tide in the dock. When I saw her she was made fast to the quay by two cables, one forward, the other aft, the shore ends being made fast to posts, on each of which sat a French gendarme to make sure that the ship would not get away!"

LOAD OF LOOT—A commerce buster moves off from burning ship with small boats loaded with captured goods.

At this there was consternation in our camp; but as our commander decided to wait a few days longer, we had to rest content.

One day, while in charge of the deck, I saw a small object apparently floating on the water near the shore. It was bobbing up and down as it rose and fell with the motion of the sea. As it came nearer it looked like a white sponge. Slowly it approached the ship, until at last, with the aid of marine glasses, I discovered that it was an old white-headed man swimming through the waves, which were high enough to make our ship roll.

GEORGIA TYPE—Cruiser *Shenadoah* on the prowl.

At last he reached the vessel, caught hold of the Jacob's-ladder, and slowly dragged his poor, emaciated body out of the water. He had a piece of gunny-sack around his hips for clothing.

After his great exertion, he fell upon the deck insensible. Our doctor poured a glass of brandy down his throat, without effect, and in a few moments repeated the dose, which revived him. He was offered a third; but the faithful Mohammedan, true to his religion, pointed his bony finger toward the heavens, and shaking his head, uttered the one word, "Allah!"

The officers contributed a lot of old clothes, two old razors, and a couple of sheets for the old man to make a turban with. A boat was lowered, and I took him to the shore, where I found the surf running so high that it was impossible to land. However, the old Moor did not mind it at all, and smilingly jumped overboard, and waded to the dry land.

The next morning a boat-load of natives came alongside, and offered us fish. We reciprocated, and offered sheets, scrap-iron, etc., which were highly appreciated.

[*Shortly after, when a boat load of crew members went ashore, they ran into difficulties. Hostile natives surrounded them, beating and kicking them, and forcing them back into the water. The returning boat crew described their reception to the captain, who ordered the ship to open fire on the area where the hostile natives were believed to be.*

With the barometer falling and a heavy swell rolling in from the ocean, the ship put out to sea, barely escaping being beached when its engines momentarily broke down. Safe on the high seas, Georgia *headed for Bordeaux.*]

WE PROCEEDED to Bordeaux, where we were informed that the French gendarmes still sat on the posts to which the *Rappachannock* was made fast at the quay of Calais.

We spent several delightful weeks in Bordeaux. Thousands of people visited the *Corsair,* as they called the *Georgia.* Many refugees from New Orleans also called on us, and showed us every attention.

At last we regretfully said good-by, and steamed down the river to the mouth of the Gironde, where we waited until night to make our escape from the Federal men-of-war, who were well posted as to our movements. With all lights out, we passed into the Bay of Biscay, neither seeing nor being seen by our would-be captors. We shaped a course for St. George's Channel, and safely entered the port of Liverpool without further adventure.

I was the only officer who desired to visit the shore on the night of our arrival. I proceeded at once to the theater, being dressed in full uniform. The audience had evidently heard of my arrival. I never before fully realized what an important personage I was, and regretted that my past had been wasted among unappreciative people. My importance suddenly dawned upon me.

The house arose *en masse,* and wildly cheered. The manager asked as a favor that I would deign to occupy the most conspicuous box. The artists acted at me alone, ignoring even the gallery, and introduced into the play "gags" about the Southern cruiser, which caused the spectators to interrupt the performance with their cheers.

After the play I was feasted by perfect strangers, graciously permitting many of them to shake my hand. I did not care whether they thought I was Admiral Semmes or not. Doubtless this was the only occasion on record where a midshipman was the ranking officer present.

THE NEXT DAY, May 10, 1864, the crew of the *Georgia* was paid off, the Confederate flag was hauled down, and the ship was put out of commission. The *Georgia* was sold to a British merchant who had a contract to carry the mails from Liverpool to Lisbon.

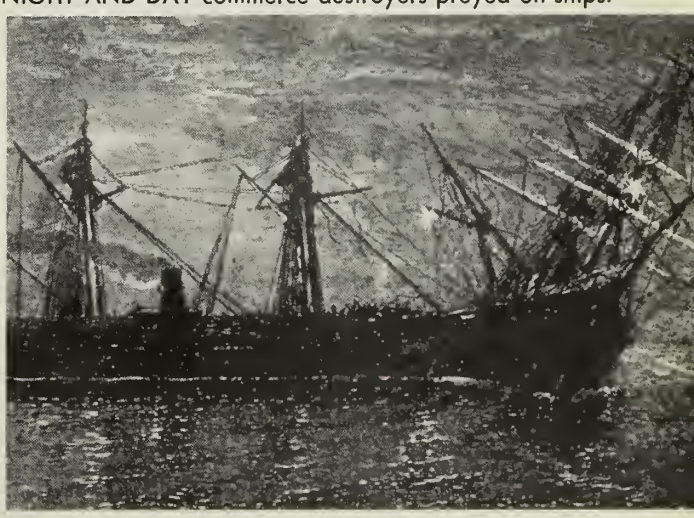
On her first voyage for the new owner she was captured off the mouth of the Tagus by the United States frigate *Niagara,* and sent to Boston, despite the fact of her *bona fide* English ownership. She was condemned by an admiralty court and sold as a prize.

Once again, during the winter of 1867, I saw the *Georgia.* Strolling along the wharves in Charleston, South Carolina, one day, my eyes suddenly fell on a familiar model. It was the gallant old cruiser, now a disreputable-looking steam-brig being loaded with cotton.

To see the Stars and Stripes proudly floating at her peak did not strike me as anything unusual. We had constantly cruised under these colors, in former days, to deceive our enemies.

A few months after I last saw her, the *Georgia* dashed herself against the jagged rocks of Newfoundland.

NIGHT AND DAY commerce destroyers preyed on ships.



TAFFRAIL TALK

WE SEE BY THE PAPERS that a former Chief of Naval Personnel—he held the post for five years, having twice been selected by Congress for extensions—is stepping down from his post as CINCNELM. Admiral James L. Holloway has announced his voluntary retirement from the Navy. In a career that spans from World War I, when coal-burners were on their way out, up to Lebanon and ships driven by atoms, Admiral Holloway climaxed his service with the task of being in over-all command of forces in the Lebanon affair. A prominent national magazine has labeled Admiral Holloway's handling of the Lebanon crisis as "distinguished diplomacy."

A dedicated naval officer, Admiral Holloway has been closely associated with education and personnel management in much of his career. He has been Superintendent of the Naval Academy; he is the author of the famed Holloway Plan; he instituted the scientific and engineering training programs whereby bluejackets go to civilian colleges for studies leading to commissions. "We go out ahead of the drawing boards," Admiral Holloway once said, to explain that men are trained to be ready for the new "hardware." Admiral Holloway and Vice Admiral Rickover combined their drives and talents in team work that produced the nuclear-trained men to run nuclear-driven ships, both ready at the same time—a rare accomplishment of modern education.

After the smooth withdrawal of forces from Lebanon, a model for historians, "Gentleman Jim" decided to retire. "That wraps it up, let some new blood take over," he said. Most fittingly, Admiral Holloway's leadership in the Lebanon affair earned him a Distinguished Service Medal.

★ ★ ★

Remember *Rankin?* In the January issue we told of her extraordinary record and, within our limits, attempted to spell out those qualities which enabled her to snatch off just about every award going. At the time the story was written she had won every award possible—except one. Competition for the Green (Operations) "E" was scheduled for the following month.

Guess what. After the final figures were computed, *Rankin* had racked up her final "E." This rounds out her score. She has now won every award possible for a ship of her type.

★ ★ ★

Here's a yarn we picked up from "Key Outpost," Key West. We don't know where they got it—other than from the "well informed sources"—but *Outpost* tells of a fishing party off the coast of Oahu when a fish got tangled up in one of the lines. It was a whopper and as soon as it came alongside, it was obvious that no ordinary methods would ever get it in the boat. Too big! The fisherman got excited and dived overboard and, to quote *Outpost*, "captured the fish in a wrestling match in the finny creature's own element."

Not bad, as fish stories go, although we've heard variations on this theme before. However, we did a little checking.

Seems that the story was true—more or less—but a little inaccurate in the details, according to the original source. In the first place, the Navyman didn't jump overboard. He didn't have to. The fish got his tail tangled in the leader of the line. The line was reeled in and the fish was caught, but wrong end to.

We prefer to think the fish got away.

The All Hands Staff

The United States Navy

Guardian of our Country

The United States Navy is responsible for maintaining control of the sea and is a ready force on watch at home and overseas, capable of strong action to preserve the peace or of instant offensive action to win in war.

It is upon the maintenance of this control that our country's glorious future depends. The United States Navy exists to make it so.

We Serve with Honor

Tradition, valor and victory are the Navy's heritage from the past. To these may be added dedication, discipline and vigilance as the watchwords of the present and future. At home or on distant stations, we serve with pride, confident in the respect of our country, our shipmates, and our families. Our responsibilities sober us; our adversities strengthen us.

Service to God and Country is our special privilege. We serve with honor.

The Future of the Navy

The Navy will always employ new weapons, new techniques and greater power to protect and defend the United States on the sea, under the sea, and in the air.

Now and in the future, control of the sea gives the United States her greatest advantage for the maintenance of peace and for victory in war. Mobility, surprise, dispersal and offensive power are the keynotes of the new Navy. The roots of the Navy lie in a strong belief in the future, in continued dedication to our tasks, and in reflection on our heritage from the past. Never have our opportunities and our responsibilities been greater.

ALL HANDS the Bureau of Naval Personnel Information Bulletin, with approval of the Bureau of the Budget on 25 June 195B, is published monthly by the Bureau of Naval Personnel for the information and interest of the naval service as a whole. Opinions expressed are not necessarily those of the Navy Department. Reference to regulations, orders and directions is for information and does not by publication herein constitute authority for action. All original material may be reprinted as desired if proper credit is given ALL HANDS. Original articles of general interest may be forwarded to the Editor.

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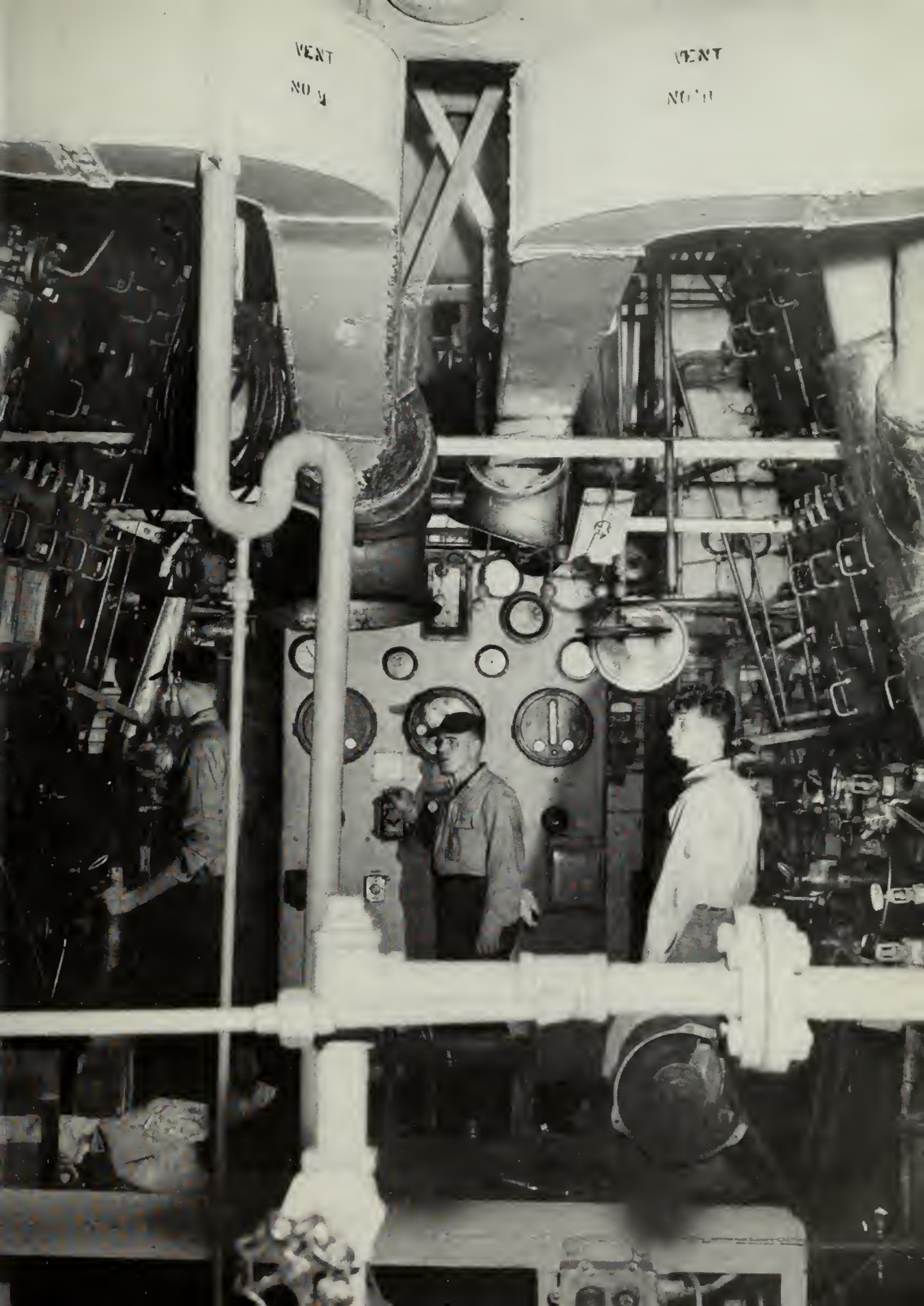
• AT RIGHT: 'POWERHOUSE' — Membres of blackgang of attack cargo ship USS *Rankin* (AKA 103) man engineroom controls as their ship makes way through waters of Atlantic on cruise out of Norfolk, Virginia.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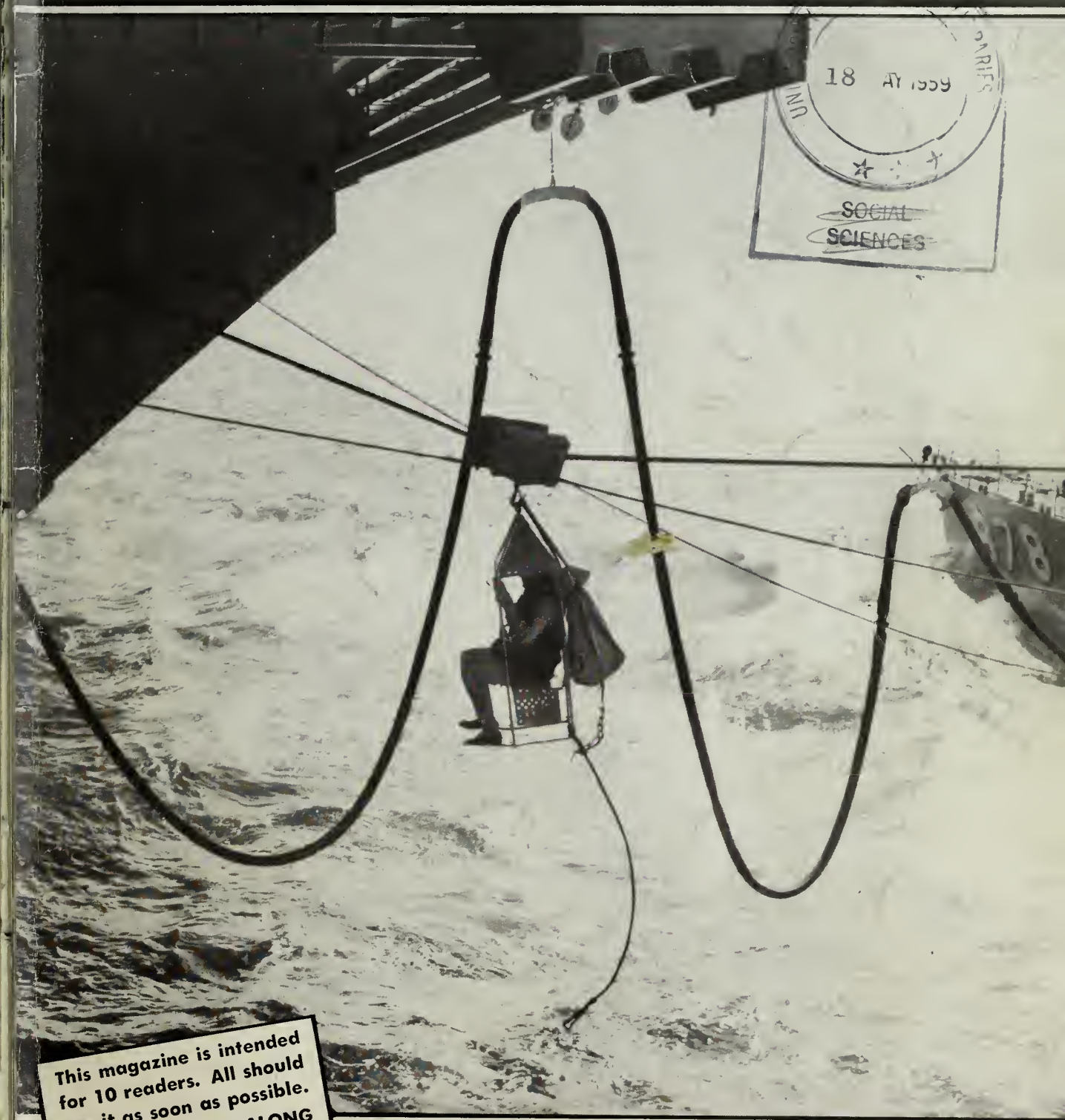
NAVY SKILLS ARE YOURS!

ALL HANDS

THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN



MAY 1959

ALL HANDS

THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN

May 1959 Nav-Pers-O NUMBER 508

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• **FRONT COVER: RIDING HIGH**—Communications officer from *USS Vesole* (DDR 878) rides the highline to carrier *USS Ronger* (CVA 61) while his Radar Picket Destroyer receives a new supply of fuel underway at sea.

• **AT LEFT: YARD GOODS**—Aerial view of New York Naval Shipyard shows five carriers being worked on. In drydocks (foreground) *USS Lake Champlain* (CVS 39) and *USS Constellation* (CVA 64) under construction. At piers in East River (from left) *USS Leyte* (CVS 32), *USS Independence* (CVA 62), ad *USS Volley Forge* (CVS 45).

• **CREDITS:** All photographs published in ALL HANDS are official Department of Defense Photos unless otherwise designated.

The Gas Turbine Story—

More Horses for Navy's

SO YOU THINK you know all about engines. You know about pistons, connecting rods, cam shafts, timing, points, condensers, and all the rest. But what do you know about combustion chambers, compressor turbines, centrifugal-flow compressors, or axial-flow compressors?

If these terms are foreign to you, you're probably not alone. They are all parts of a gas turbine engine. An engine that is older in concept than the present-day piston engine, but one which is just now coming into use both in and out of the Navy. It is one of the simplest in existence and it can pack more power with less weight than any other engine known. Gas turbine engines are already in use in the Navy for ship propulsion, emergency generators, portable water pumps (replacing the handy billy), and as fog generators.

Today the Navy has 340 gas turbine engines installed in 185 different ships and boats. These pack a total of 54,486 horsepower and have been operated for 88,835 hours. More gas turbine engines are being developed and tested all the time. Eighty-two engines with combined 14,587 h.p. are now being procured. They will be placed in 74 different ships.

HOT STUFF—Exhaust from turbine tail pipe melts snow on icebreaker's deck.

But how do gas turbines work and what are the advantages or disadvantages over engines now in use?

The basic principle of the gas turbine is simple. It has three major components: an *air compressor,* a *combustion chamber,* and a *turbine.* Here's how they work:

- ***Air Compressor***—There are two types of compressors used in gas turbine engines: centrifugal-flow, which compresses air by pushing it out from the center of a compressor wheel; and axial-flow, which compresses the air by passing it parallel to the shaft through fan-like stages. Air is drawn into the compressor and then passed on, under pressure, to the combustion chamber.
- ***Combustion Chamber*** — Here part of the air is mixed with fuel as it is sprayed into the combustion chamber. This produces a peak temperature of 3500 degrees F. The remainder of the air is used to reduce this temperature to about 1500 degrees F as the hot gases pass under pressure to the turbine.
- ***Turbine*** — The expansion of these hot gases through the turbine turns the engine. The turbine is attached to the same shaft as the compressor, and as the turbine revolves, so does the compressor. So long as fuel is injected into the engine, the cycle continues — one running the other. No matter how complicated a gas turbine engine may become, these three basic parts are present.

About two-thirds of the power

produced by a gas turbine (the name gas turbine is derived from the gas producing element, not the kind of fuel burned) is used to drive the compressor. The gas turbine is started by spinning the turbine much the same as you start an automobile engine. A sparkplug ignites the fuel and the engine is started. No more spark is used.

The gas turbine is now running itself. Although two-thirds of the power is used, one-third is still left to do the work. Here's how the last one-third is put to use.

In many cases where a constant speed is required, as in an A.C. turbo-generator set, the power is taken directly from the single-turbine shaft. When variable speeds are needed, a split-shaft engine is utilized. This is how it works. Inside the metal casing which encloses the compressor turbine is a second turbine, called the power turbine. It is not connected to the main gas producer in any way, except through the outside casing.

Ocean Stable

In this split-shaft unit, after the hot gases from the combustion chamber pass between the blades of the compressor turbine, they are redirected to the blades of the power turbine. It is from this turbine, through reduction gears, that variable speed power is produced.

When the 160-hp engine, which is now installed in several minesweeping boats, runs at a constant speed, the compressor and compressor turbine spin at 36,500 rpm, the second stage power turbine spins at 24,000 rpm, and the output shaft (after reduction gears) spins at 2700 rpm. The temperature drops when the gases expand through the compressor turbine and the power turbine.

Speed of the turbines is regulated by injecting more or less fuel into the combustion chamber. Even at idle, however, the gas-producing turbine runs at a speed considerably higher than the full speed of the average piston engine.

Few accessories are needed on the gas turbine. It has a governor, a fuel pump, a starter and a generator. These are located on the gas producing end of the engine. The governor is also used in conjunction with the power turbine. One of the minor problems now being encountered is the difficulty of maintaining a constant speed on the power turbine. Constant speed is easily maintained on the gas-producing section.

The gas turbine is simple in comparison to other engines. That is the real advantage. And being basically simple, there are fewer moving parts in the engine. This means fewer parts to lubricate, lower maintenance costs, fewer operating personnel, a more reliable power plant, and fewer spare parts. With no pistons, connecting rods, or cam shaft, the only parts to lubricate are the bearings around the straight shaft which runs through the gas turbine engine. Also, with no reciprocating motion, noise and vibration are materially reduced. This factor makes the gas turbine important in ASW work.

Less weight and bulk make it possible to put more horsepower in the same amount of space. A 400-hp gas turbine engine, for example, weighs about 600 pounds, while a diesel engine of the same horsepower, weighs 5000 pounds. Here are some specifics:

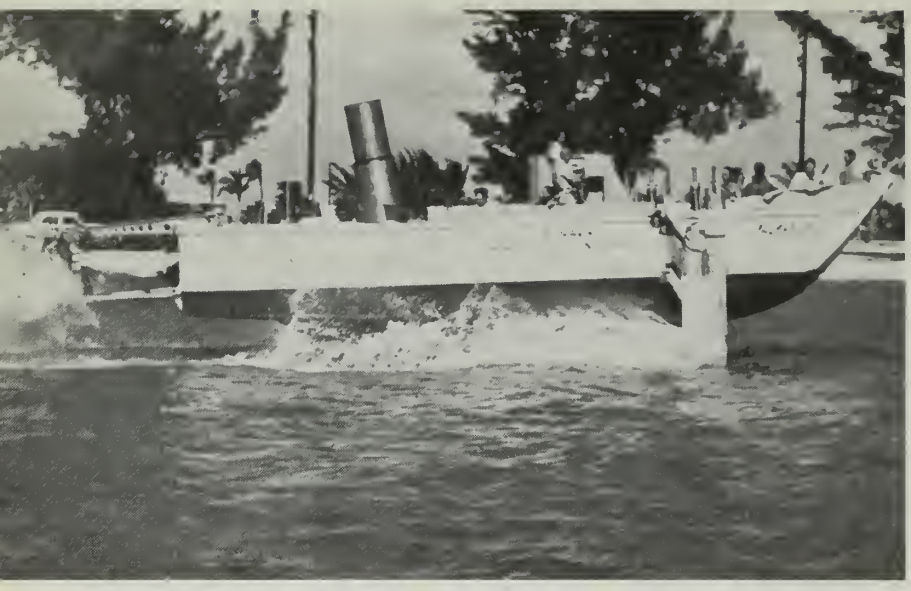
• ***Operating Personnel***—The best figures available in this department come from merchant ships. In three Liberty-type ships, which have been converted from their original propulsion plants, one ship equipped with a steam turbine has an engineroom crew of 16 men; another with diesel engines, has an engineroom crew of 14 men; and a third, with gas turbines, has 12 men—a reduction in the engineroom staff of about 25 per cent over a steam turbine. With gas turbines, fewer operating controls are needed, thus making them an ideal engine for operation by remote control. Full wheelhouse control can be used in gas turbine propulsion installations.

• ***Repairs*** — Simplicity of design and operation goes hand-in-hand with easy repairs. Although the time required to overhaul an engine varies with the engine itself, as a rule, gas turbines take less time to overhaul than most other engines. Operating personnel of a 160-hp engine installed in a minesweep can remove and disassemble one of the gas turbine engines in six hours. A crew of four men can remove all four of the minesweep's gas turbine engines in eight hours. In 20 more hours these same four men can have replacement gas turbines installed in the ship and operating.

One ship equipped with a 1200-hp gas turbine reports that the in-port maintenance time is only a fraction of that which was required with its former steam plant.

• ***Reliability*** — A merchant ship equipped with gas turbine power has reported that they have logged over

FULL POWER—Below is one of merchant ships now gas-turbine propelled.



UP AND AT'EM—An experimental Navy hydrofoil boat flies high as it tries out a gas turbine engine as its power plant while cruising in Miami waters.

7100 hours and 102,00 miles without needing any turbine repairs. The 300-kw emergency generator gas turbine aboard uss *Gyatt* (DDG 1) goes from cold to full power in 10 seconds. It is rigged to cut in automatically to furnish needed power.

Cold-weather starting is important, especially in small boats. A 160-hp engine was left on deck overnight in temperatures that ranged from 9 to 15 degrees F. It started easily the next morning. Gas turbines have been tested under various weather conditions and have performed well in all circumstances. Several BuShips engines have been successfully tested to minus 65 degrees F.

• ***Weight and Size***—Although specific weight and size of gas turbines depend on the type of power plant, current tests have shown that gas turbines occupy about one-fifth the volume and about one-tenth the weight of the diesel engine. Here's a comparison of various-type power plants of equal power rating:

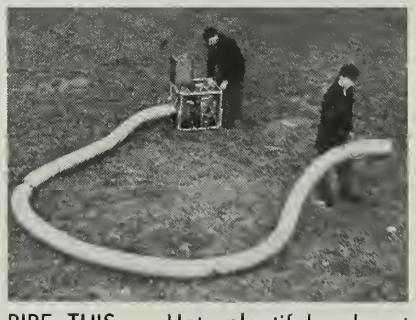
Type	Weight, lbs.	Volume, cu. ft.
Gas Turbine	230	10.8
Aircraft, gasoline, reciprocating	356	17.6
Automotive, gasoline, reciprocating	1500	34.5
Diesel	2650	53.3

• ***Fuel***—Gas turbines are designed to burn diesel fuel. Although this has no advantages over diesel engines, it does have a great advantage over gasoline engines. Diesel fuel is less flammable and safer to have aboard ship. With the gas turbine portable emergency fire pump (the only gas turbine to have manual starting), which has replaced the handy billy aboard some ships, diesel fuel is used. This eliminates the problem of gasoline.

• ***Noise and Vibration*** — Aboard ships in the Navy, men have to live near engines of one sort or another. With fewer moving parts, gas turbines are practically vibrationless. They are also very much quieter than most reciprocating engines. The high frequency of the noise produced by the gas turbine makes it relatively easy to soundproof the installation as contrasted to the low frequency sound of piston engines.

After reading these advantages, you're probably wondering, if gas turbines are so good, why aren't they in more general use—say in autos.

That's a good point and one that is even now being seriously considered by many large automobile manufacturers. They have already installed



PIPE THIS — Hot, plentiful exhaust of gas turbine demonstrated here can be used to make smoke or melt snow.

gas turbines in experimental cars, and just recently one company test-drove a gas-turbine-powered car several hundred miles, on turnpikes, on country roads, and through cities. They averaged over 19 miles per gallon of fuel.

On one leg of the trip they burned diesel fuel, aviation jet fuel, and gasoline in the engine. The company said that their engine would run on almost anything that would flow through the fuel lines.

The automobile companies use a regeneration process that may be the answer to the extremely hot exhaust problem of the gas turbine. Regeneration simply means the utilization of heat from the exhaust gas. By using a heat exchanger, the heated air is mixed with the air from the compressor before it enters the combustion chamber. The higher temperature of the incoming air lowers the amount of fuel required. With much of the heat removed, the exhaust gases range from 300 to 500 degrees F, considerably cooler than piston type engines running under load.

The other problem of high cost will most likely be remedied by mass production. With these two problems seemingly answered, it has been predicted by some men that in 1960 or 1961, a gas turbine engine may be offered as optional equipment in some well known American models.

One of these automobile engines which uses regeneration has impressed the Navy. They have purchased it and will mount it in a small personnel boat for evaluation.

Although gas turbines have many advantages, nothing is perfect. Here's a rundown on some of the disadvantages for marine use:

• ***Part-Load Performance*** — The simple open-cycle gas turbine works most efficiently at full or nearly full power. It should run at 90 to 100 per cent of full power for best efficiency. Automobile manufacturers have, however, obtained excellent part-load efficiencies by using the regeneration-type engines.

• ***Ducts***—With the large air flow going through the engine, large intake and exhaust ducts are required. Although this can be an advantage by using the intake for ventilation, large ducts are a distinct disadvantage. Experiments are now going on at the U. S. Naval Engineering Experiment Station at Annapolis, Md.,

to find out ways to reduce the size of ducts without hurting engine performance.

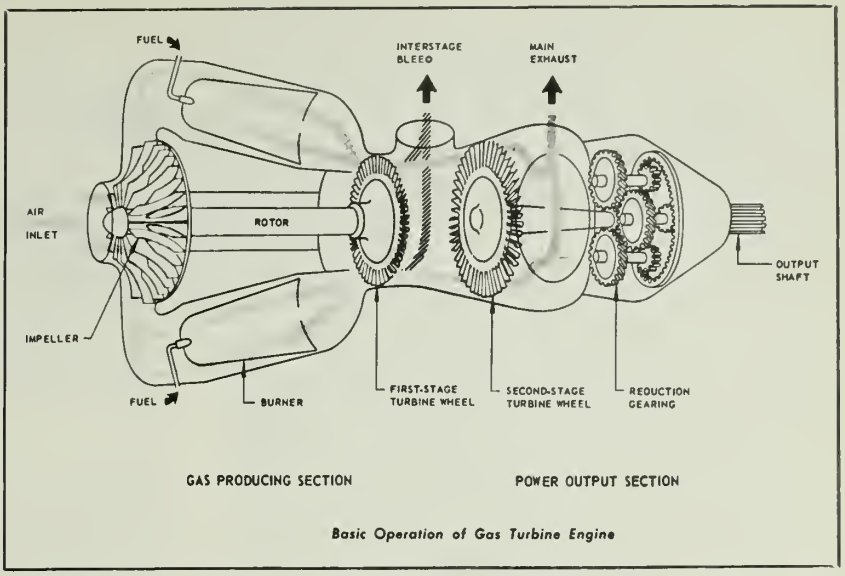
• ***High Initial Cost*** — Like most other new items, the initial cost is high. The reason for this is twofold. First of all the parts cannot be mass-produced because of the limited demand, and secondly, the materials needed to withstand the high temperatures inside the engine are very expensive. More extensive use of the engines would tend to bring the price down.

An example of the high cost is shown by the compressor turbine on one small engine in Navy use. This small turbine (about 10 inches in diameter) alone costs between $1000 and $1500. A large commercial company, however, has indicated that this same turbine could be mass-produced for less than $50. New and less expensive alloys are also being developed which further promises to reduce costs.

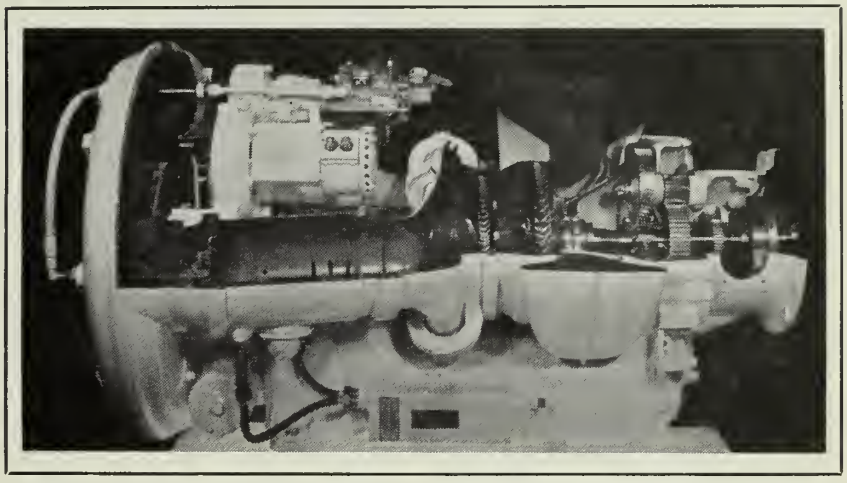
• ***Effect of Sea Air on Compressor*** —As the great mass of sea air is inducted into the gas turbine, a coating of salt often develops on the compressor blades which lowers its efficiency. This is usually corrected, however, by washing the turbine. This is done by injecting fresh water into the compressor while the engine is running. Although the water goes through the engine, it causes no trouble. Immediately after it leaves the compressor, it is turned into steam by the extremely high temperatures.

Advantages and disadvantages alone don't always determine whether or not an engine is used. If it has the qualities needed for a certain job, it is used. Gas turbines fall into this category. With its simple operation, light weight and high horsepower, it is an ideal engine for small boats, emergency generator sets, and emergency water pumps. With fast starting capabilities, it is particularly adapted for use as emergency generators and for propulsion units. Because no warmup is needed, a ship's propulsion unit can be in operation in less than a minute.

Now that we know the Navy has gas turbine engines in use, let's find out a little about their development. Gas turbine engines are not new. The U. S. Navy has been experimenting with them for some 20 years. The basic concept, however, dates back to the first known turbine



HERE'S HOW—Diagram and cut-a-way show parts and basic operation of gas turbine similar to ones being developed and tested for many uses in Navy.



built by Hero of Alexandria about 120 B.C., give or take a few years. He called it the Aeolipile, and it seems that he used it to open the doors of a new temple automatically.

Even though the basic principle of the turbine was known, it lay idle for centuries. In 1550, Leonardo da Vinci sketched a turbine device to turn a spit for roasting meats. The turbine-like device fitted into the chimney and was turned by the rising hot gases. Thus another application of the turbine principle.

Giovanni Branca, another Italian, developed the turbine further by adding steam. He boiled water in a closed kettle and allowed the steam to escape through a jet tube. The jet stream was directed on a horizontal fan which spun at high speeds. By using reduction gears, the spinning fan drove a stamp machine.

It was not until 1791, however, that John Barber in England built a gas turbine that worked. Although crude, it had the same basic parts as the modern gas turbine.

Three years later, a patent was taken out on an internal combustion reciprocating engine. This engine was quickly developed until, in 1860, a piston engine that showed promise was developed. From that time the piston engine has been constantly improved, while the gas turbine remained in its infancy.

Today experts say that the piston engine is reaching its peak of perfection and improvements are becoming progressively more expensive and complex. The gas turbine still has a vast improvement potential. Automobile manufacturers, locomotive designers, ship builders, and aircraft engine designers and builders are continuing to develop the gas turbine as a new means of power.

Among the navies of the world, the U. S. Navy stepped ahead in early gas turbine research. A research and development program was established in 1939. They issued their first contract in 1940 for a 3500-hp gas turbine. It was delivered to the U. S. Naval Engineering Experiment Station at Annapolis in 1944.

Other type gas turbines were studied, and improvements were made until, in the spring of 1951, a gas turbine was installed in an LCVP. So successful was this, that the Navy later installed gas turbines in 48 minesweeping boats. Gas turbines seem to be ideal engines for these small boats.

Although the Navy already has 340 gas turbines installed in 185 ships and boats, research is still going on just across the river from the Naval Academy at the U. S. Naval Engineering Experiment Station. Here are found gas turbines of every description. They range up to a large 7500-hp engine designed for use in a main propulsion plant.

The Bureau of Ships determines the needs for new gas turbines to meet future Fleet requirements. Once the specific characteristics for a turbine application are fixed, the Internal Combustion and Gas Turbine Engine Branch of the Bureau of Ships selects a turbine to do the job. Long-range planning is done to come up with new turbines. This means research and development. The work is initiated and directed by this Branch (headed by CDR R. G. Mills, USN, with Mr. J. W. Sawyer as head engineer for gas turbines).

SMOKER—Navy landing craft lays down a smoke screen with a gas turbine used as a smoke generator.

At the Engineering Experiment Station, gas turbines undergo every kind of test before they are installed and tested under actual Fleet operating conditions. Once it has been determined that the engine meets Navy standards for efficiency, safety, and reliability, it goes into the Fleet for actual service use. Every type of engineering problem is explored at the Station. CDR Robert Moyer, USN, who is project officer for gas turbine research there, has also worked with both diesel and steam propulsion plants. "No more, however, than any other officer who has served aboard destroyers or been in a shipyard," CDR Moyer said. Talking about gas turbines, he said, "You just can't say too much about them. They will undoubtedly replace many diesel engines in the future." But he was quick to add that gas turbines wouldn't by any means put diesel engines or steam turbines out of business. Gas turbines, like other types, will find their own place by improving their efficiency and meeting their competition.

With gas turbine engines now going into the Fleet, problems would arise, CDR Moyer pointed out. "Problems are our business. If the engines don't perform properly, or if they are not completely understood, one of our engineers may have just the right answer. The Experiment Station particularly wants to help the Fleet with any engineering problems that come up—and this of course includes gas turbines."

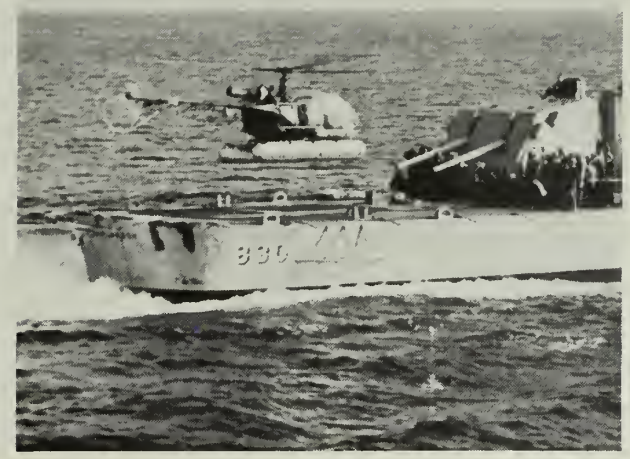
The Engineering Experiment Station, under the command of CAPT Richard L. Mohan, USN, employs about 900 civilian engineers and technicians.

For men in the Fleet who want to learn about gas turbines, some information is already contained in several engineman's course books. *Engineman Third* (NavPers 10539) seems to have about the best rundown, although those for other engineman rates have information.

For the officers, or for the chiefs and whitehats who are qualified to take officer courses, there are additional courses covering this field. Specific course names and numbers should be available from your Information and Education Officer.

You will be hearing more and more about gas turbines in the future. If you're interested in engines, you'll probably enjoy learning about this type. —Erwin Sharp, JO1, USN.

WATER BIRD—New gas-turbine-powered copter with choice of boat hull or wheels can land almost anywhere.



CLOSE QUARTERS—Jet copter lands on fantail of USS *Everett F. Larson* (DD 830) during ASW demonstration.

Destroyer Heliport

Some of the Pacific Fleet's top destroyermen showed naval and civilian observers how the combination of a 30-knot destroyer and a 110-mile-an-hour jet-helicopter can counter the threat of enemy submarines.

Operating from fantail of radar picket destroyer USS *Everett F. Larson* (DDR 830) in mid-January, an *Alouette II* helicopter carried dummy torpedoes to a simulated enemy submarine contacted on *Larson's* detection equipment. It dropped its deadly "fish" and was back on *Larson* within minutes of the initial contact.

Helicopters used in operations with destroyers carry homing torpedoes and are guided to the target by the destroyer's CIC before the submarine knows it is being attacked. Its use increases the destroyer's kill range of enemy submarines by more than 10 times.

In addition to producing its own protective smoke screen, the *Alouette II* can employ other, still secret, deceptive and aggressive countermeasures which add greatly to its assault potential.

RADM B. J. Semmes, Jr., COMDESFLOT 3 said, "The entire Navy destroyer forces of more than 300 operational ships can be modified in a matter of hours to operate helicopters." He pointed out that destroyer-helicopter teams extend the kill capability of our antisubmarine forces out to the range of the latest sonar detection developments.

Partial credit for the quick readiness can be given to the ingenuity of the men of the destroyer tender USS *Bryce Canyon* (AD 36).

Since *Larson* was to be the first ship of this type on the West Coast to be made ready to receive a helicopter, original designs had to be devised.

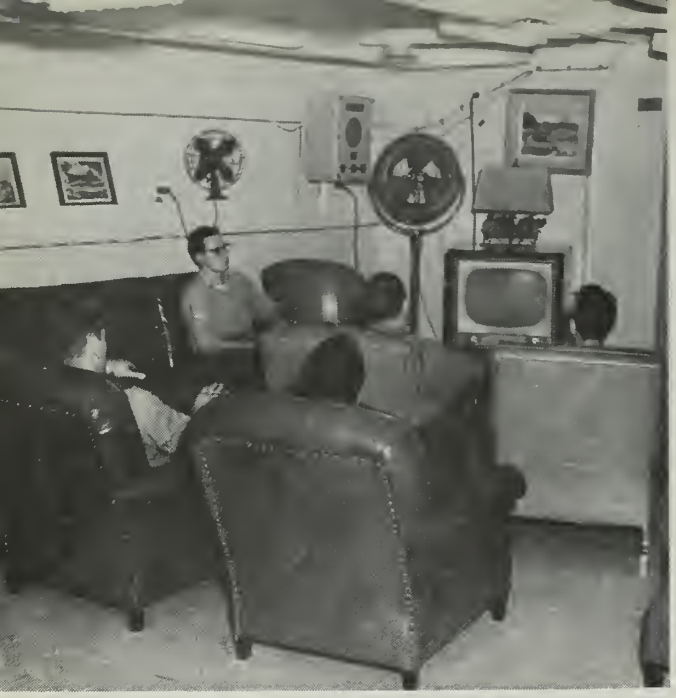
Men on board *Bryce Canyon* played it mostly by ear. Clearing *Larson's* fantail of depth-charge racks and other structural members was simple. However, originating a method of having all the stanchions and lifelines release rapidly and lie outboard (during take-offs) was one of their most difficult tasks. This was solved by using toggle pins in the base. Using this method, *Larson's* crew can ready the fantail in about a minute.

Bryce Canyon's men invested two weeks and close to 400 man-hours in this special project. Because of their research, other destroyers can accomplish similar jobs in hours.

Other changes made to *Larson's* 40-by-28-foot fantail to make it into a helicopter landing field included clearing away all towing gear, ventilators and hatches. Hold-down hooks were installed and the deck was resurfaced with a non-skid material.

The *Alouette II* helicopter used in the demonstration has a turbine power plant which drives the lifting rotor through a mechanical transmission. It uses standard diesel fuel of low volatility. This type of helicopter requires no warm-up, and is ready for operation when the turbine reaches maximum rpm which is within 90 seconds. It can be airborne and ready to attack by the time the ship's crew mans its battle stations.

DUMMY homing torpedo is dropped by jet copter based on destroyer.



LEISURE HOURS—Carriermen take it easy in EM lounge while off duty. *Rt:* Navymen put on show aboard ship.

So What'll It Be —

BLASTING—Clay pigeons at sea and golf course ashore furnish white hats enjoyable hours in their spare time.

THERE'S NO QUESTION about USS *Saratoga* (CVA 60) being a mighty ship. She is over 1045 feet long, displaces more than 60,000 tons and is deseribed as "one of the largest and most powerful warships afloat."

In design and appearanee, the mighty "*Sara*" is similar to her sister ships—*Forrestal, Ranger, Independence* (all in commission) and *Kitty Hawk,* which is under eonstruetion. But, like every ship in the Navy, she has a personality all her own.

She doesn't have to boast about her size and capabilities—they are taken for granted and understood. But she does raise her voiee now and then, and maybe even brags a little about her erew and physieal fitness.

It is *Saratoga's* goal to have a "strong crew for the Navy's strongest ship."

If at all possible, you should pay her a visit and see for yourself. Even the well hash-marked Navyman is amazed at the eomplexities of her bridge, CIC, eatapult and arresting gear, her boilers and other engineering spaces, as well as the countless shops and ready rooms.

All of these are vital points of interest aboard this mobile air station and well worth seeing, but no call on *Saratoga* would be complete without visiting one of her most unusual features. This would take you forward to the port side of the 0-1 deek—to the anehor windlass area of the first level above the hangar deek — an area seldom seen by visitors.

As you enter a door labeled 01-12-2, you'll see something that's a real eye-opener. You are faeed with a large eompartment 25 feet wide and 27 feet long. Mueh to your surprise, its deck has green tiling and the bulkheads and overhead are painted white—a far ery from the customary paint-mixing room found in this eompartment aboard *Sara's* sister ships.

INSIDE COMPARTMENT 01-12-2 you'll find the secret to *Sara's* suecess and why she boasts of her erew's physical fitness. This is the loeation of a modernistie, well-equipped workout gym.

A quick tour of the gym would show: A weight maehine for the development of baek and shoulder museles; an eight-by-four-foot, rubber-topped, weight-lifting stand; a "workout bieycle" complete with mileage gauge; and a "body bag" familiar to all boxers. This large eanvas bag is sturdily affixed to the overhead with chains and shackle.

Against the far bulkhead there's a set of parallel bars for the gymnastie enthusiasts. They are eonstructed from metal pipes and bolted to the deck. A rowing machine for building up shoulders and back muscles

BATTER UP—Members of ship's baseball team warm up. *Rt:* Navymen box on deck to keep in physical condition.

Settles' Gym or Teepee Terrace?

is found across from the P-bars. Next is the angle board for sit-ups and mounted on the port bulkhead are two speed punching bags. Toward the center of the gym are rings suspended by nylon lines for those who are interested in gymnastics. And there's a large metal locker for the stowage of boxing gloves, weights and other equipment.

The gym deck is large enough for wrestling mats to be spread out and the grapplers can go ahead with the body building produced through the grunt-and-groan department. Yet there is plenty of area for the boxers to spar and have their workouts when the mats are not down. The wrestlers have to lend their mats to the tumblers on occasion but with the spirit of cooperation that has become standard in the *Sara,* there is no problem in scheduling.

The success of *Sara's* workout room has been so great that many additional features are planned. The compartment immediately adjacent and starboard of the present gym is being converted to include a rub-down table, whirlpool-steam bath, lockers and, eventually, showers.

NO DOUBT YOU are wondering how all this came about. Luxuries (if they can be called that) like this are not included in the original design of warships—even those as modern as *Saratoga.* Such facilities for the crew just do not happen by accident.

Sara's gym started with an idea that was followed up by the determination and leadership required to carry through and make that idea a reality. Responsible for all this was Roy Settles, BM3, USN.

Settles has the leadership qualities that can be put to good use in today's Navy—the kind of leadership that makes itself felt in many ways. He saw the needs of his shipmates, and had the required ability to win the support of authorities controlling facilities, materials, supplies and enthusiasms.

Aboard *Saratoga* Settles is known to most of the crew for his achievements in boxing. Not every Navyman is a boxer, and Settles felt there ought to be facilities to give every member of the crew an opportunity to participate "whenever possible" in some form of athletics. So Settles went ahead to improve the "whenever possible" odds.

IN ADDITION to "Settles' gym" *Saratoga* has other athletic accomplishments worth boasting about. Take her basketball team for example. During the recent season it had a record of 16 wins and one loss. The only loss came early in the season from the cruiser *Salem.* In a return game, however, *Sara's* basketball team won with a substantial margin.

Then there's the *Saratoga* Rod and Gun Club—believed to be the Navy's only club of its kind for seagoing sportsmen. This activity has been in full swing for almost a year and has about 300 active members. Through this club, *Sara's* hunters and fishermen now enjoy many of the same privileges that they would normally receive ashore while they are aboard the attack aircraft carrier during long periods at sea and during overseas deployment.

Saratoga's Rod and Gun Club meets monthly and usually schedules movies on hunting and fishing or educational films which acquaint members with the proper use of equipment, safety and conservation. These movies are very well received and they do much to promote good sportsmanship.

In addition to the movies and club business that must be taken care of during the monthly meetings, crew members have an opportunity to get together and swap hunting yarns and tell their favorite fish stories about the big ones that got away.

Other than these social advantages, the club sponsors monthly contests which offer club members a chance to win rifles, shotguns and fishing equipment. The club also affords members the opportunity to purchase sporting and camping equipment at reduced prices.

For the rod and reel enthusiast, *Sara's* club conducts an annual fishing contest. At year's end, the club members who have caught the largest

fish in each category are awarded a grand prize. An award certificate, suitable for framing, is presented to members who caught "qualifying" but not prize-winning fish.

Membership in the club is open to all personnel aboard the carrier. the club is chartered and governed by a Board of Directors that is made up entirely of enlisted men. The presiding chairman and founder of the seagoing sportsman club is Ronald R. Siegerdt, GM1, USN.

Siegerdt went about organizing *Sara's* Rod and Gun Club much in the same manner as Settles did in getting his gym. It took plenty of hard work and the attitude of the enthusiast who wants to keep up with the sportsman's way of life while at sea.

THIS KIND OF ATTITUDE is not limited to one ship or station.

While Siegerdt was getting hunting and fishing enthusiasts organized aboard *Saratoga,* Chief James E. Fitzgerald was engaged in a similar venture at NTC Great Lakes.

Reporting from a tour of sea duty aboard USS *Franklin D. Roosevelt* (CVA 42), Chief Fitzgerald was somewhat disappointed when he discovered his new duty station was minus an outdoors men's club. Batting the breeze with others quickly satisfied the chief that many other sportsmen longed for such a club.

That's all that it took. An idea, detailed planning and a great deal of hard work, and another program became a reality. "From the look of the club's progress," Chief Fitzgerald said, "our group will soon be open to all interested armed forces sportsmen in the Great Lakes area.

The Great Lakes Sportsmen's Club has made much headway since Chief Fitzgerald first started his project. For example, today it is busily engaged in working directly with the Illinois Department of Conservation. "Success in any club of this type lies in direct cooperation with the state and private land owners," he said. "Our club has been awarded the rights to hunt on 3000 acres of land in this area. In return we stock the land. We also help the farm owners control farm pests such as crows, foxes, coons and groundhogs."

NAS LAKEHURST also has a conservation club which was founded about five years ago as a means of extending the recreational facilities at that LTA base.

And that they did — and then some. For the gigantic air base which was once practically deserted by most forms of fish and wildlife is fast becoming a sportsman's paradise.

Land that didn't provide enough vegetation to feed more than one deer for every 40 acres now has more than 200 of them; a single covey of quail has multiplied eightfold; and the station now has two new fishing ponds that were dug out and stocked with bass and bluegills.

All this was accomplished by some 40 sportsminded Navymen who freely gave their off-duty time, energy, ability and even personal finances. Although club members have devoted much of their off-duty time to this project, they do not claim all the credit.

They received technical guidance and material assistance from many civilian government activities, including the U. S. Wildlife Service, New Jersey State Fish and Game Commission and Rutgers University.

MEANWHILE, up in the Pacific Northwest, some 3000 miles from Lakehurst, the bluejackets at NAS Whidbey Island were engaged in a similar project. The local Rod and Gun Club was working on a program to improve the waterfowl and upland game hunting in the Oak Harbor and Crescent Harbor areas.

In cooperation with the State Game Commission, the Whidbey Navymen planted barley on unused land at the naval base. An official of Whidbey's Rod and Gun Club stated, "By improving this area, we are gaining better hunting for ourselves; creating good will among the local people as well as the State Game Commission; and perhaps most important, we are making good use of unproductive land."

Rod and Gun Club members toiled after working hours and on week ends using borrowed farming equipment and some Navy gear that wasn't being used for any other purpose at the time. They seeded about 300 acres. Long-range plans for the area include fertilization, pond construction, additional seeding, tidal control and ground cover.

Another example of Navymen getting together and improving existing recreational facilities is at NAS Grosse Ile, Mich., where five energetic sailors devoted more than 500 hours of their own time to build a boat marina.

This marina consists of a 50-foot "T" shaped pier with berthing spaces for 16 boats plus gasoline refueling facilities. It's used by a Special Services fleet of eight aluminum outboard runabouts, and boats that are privately owned by station personnel.

Made from six-foot-wide pieces of steel matting welded side by side

COOL JOB—Navymen at New London sub base put in many hours to turn waste land into Rock Lake recreation area.

to 55-gallon drums, the pier is anchored to three-inch pipes that were driven into the lake bottom. The pipes pass through holes in the edge of the matting, permitting the pier to ride up and down with the frequent changes in the water level.

The marina, which is "the equal of any on the fashionable down-river Detroit island," is the handiwork of: W. J. Hartranft, BM1, USN; H. F. Kibesh, EN1, USN; J. J. Zager, BM2, USN; E. I. Miemi, EN2, USN, and J. N. Nelson, EN3, USN.

WHILE THESE FIVE MEN devoted their free time to building the marina at NAS Grosse Ile, some 30 to 50 bluejackets per week labored during their leisure hours to convert an unused area of thick underbrush, trees and swampland at the U. S. Naval Submarine Base, New London, Conn., into "one of the finest recreational facilities aboard any naval installation."

After countless hours of work—hard work in summer heat and winter cold—the volunteer workers became near experts in the art of ditch-digging, rock-moving and swamp-draining. With these basic jobs done, they then had to perform the duties of rock and brick masons along with those of landscape gardeners, carpenters and road-builders. Everything that would make for the most complete recreational area that came to the minds of the creative laborers, was built. This included the fireplaces, patios, picnic tables and bathhouses.

The rehabilitation of wasteland started with the draining and reconditioning of an unused area up on a hill on the northeast section of the base which is today known as Rock Lake. This area has a 700-by-300-foot lake of crystal clear water fed by springs which are located at the bottom of the giant ledge-lined basin. It has two beaches, one at each end, a bandstand, three rafts, picnicking facilities, a geedunk stand and a bathhouse. These facilities can accommodate about 3000 people and still have plenty of extra space.

The project did not end here. When the Rock Lake phase of the job was done the work crews moved along the rim to the CPO club. On a high ridge of pine-studded land facing the rear of the club, a large picnic area called "Teepee Terrace" was constructed so the Navymen and their families could enjoy outdoor eating beneath the pines.

AT 'SEA' ASHORE—Enterprising Navymen stationed at NAS Grosse Ile, Mich., put in spare time to build this boat marina for Special Services fleet.

To the left of Teepee Terrace, the "Crow's Nest" a cozy lookout patio, was built high on a ledge. Its name is most appropriate because of its commanding view of the submarine base and the picturesque panoramic view of the Thames River and the ships of the "Silent Service" moored alongside the piers below. The Crow's Nest is furnished with a long picnic table and an outdoor fireplace.

The flanking attack against the ledge and underbrush did not stop at the Chief's Club. It also resulted in two other projects—a miniature golf course and another small swimming pond for the officers and their dependents.

LIKE THE HARD-WORKING sailors at New London, crew members of USS *Wrangell* (AE 12) had the desire for additional recreational facilities aboard their ship and decided to do something about it.

When ordered from Naples—her home port—to the eastern Mediterranean last summer, *Wrangell* crew members knew what to expect during the hot summers. So they requested permission from their skipper to construct a canvas swimming pool on the ship's fantail where a 5-inch 38 caliber gun was once mounted.

The CO readily gave the OK and no time was wasted in rounding up the necessary canvas, wood, rope and metal pipes needed to construct the "heat beater." When completed a few hours later, the pool measured 12 feet square and five feet deep. It held 22 tons of water.

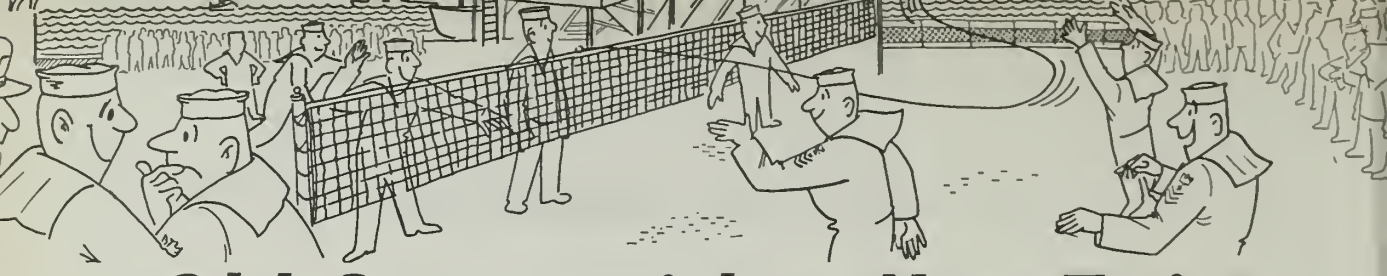
With appropriate ceremony the pool was opened for all hands "off watch." And with its free-flowing, no-cost sea water, the pool provided the answer to what had been a pressing question on previous cruises—"How do you beat the torrid summer heat, operate at top efficiency and keep morale at a peak?"

With a little imagination, leadership and volunteers willing to work, there's much that has been done to improve existing conditions aboard ships and stations.

Small ships, big ships, isolated bases, large naval stations—all have produced ideas that make for a top sports and recreation program. A DE, obviously, cannot do what a huge flattop can, and a small auxiliary unit would have trouble tackling a project carried out at Great Lakes, but this and past issues of ALL HANDS have reported some of the outstanding examples of what Navy teamwork can accomplish. If your unit has a different program underway, let's hear about it.

—H. George Baker, JOC, USN.

ROLL ON — Bowling alleys afford Navymen recreation and competitive sport at Navy shore establishments.



Old Sports with a New Twist

WHILE NAVY do-it-yourselfers have been busy taking steps to improve recreational facilities aboard their individual ships or stations (see page 8), the Recreation and Physical Maintenance Branch of the Special Services Division of the Bureau of Naval Personnel has not been idle.

They, too, have been busily engaged in the development of new methods of keeping U.S. Navymen fit and providing recreational programs for their off-duty hours. In recent months, the Bureau has issued two new leisure-time kits to help seagoing bluejackets while away their spare time.

These kits consist of equipment for playing "captive volleyball," a modified version of volleyball ideal for play on weather deck areas aboard most ships; and a "Navy Mark I Kit," which consists of air rifles, pistols, pellets and targets.

The Bureau purchased 95 captive volleyball kits and shipped them at no expense to seven Atlantic Fleet and six Pacific Fleet type commands for evaluation. Each kit contained a tether ball and a volleyball net. Commands receiving this gear had to supplement it with a wire cable the same length as the net, a cord and ring attachment and, of course, the players.

A set of rules and modifications were provided with each kit and it was suggested that the various types of ships testing the gear should employ their own rules and modifications to fit their particular needs.

Captive volleyball differs from regular volleyball in the following aspects: the ball is attached to a cord, which has a ring on its opposite end; the ring is placed on the cable which is stretched one inch above the length of the volleyball net. Thus captive volleyball can be played without fear of the ball going over the side or bouncing loose across the deck. The length of the cord is determined by the play area. Nylon parachute shroud line makes an ideal cord, but ordinary white line is also practical.

Here are the general rules:

- In playing captive volleyball regular rules will be observed except that there will be no out-of-bounds markings.
- Points will be scored by allowing the ball to touch the deck of the opposing team.
- Position of the server on serving will be determined by the length of the cord line.
- After service the ball can only be touched three times before it must go back over the net.
- The cord line must remain free and unhampered as much as possible although it can be touched or brushed by a player as long as play of the ball is not hindered.
- Deliberate grabbing or pulling on the cord line while the ball is in play constitutes a foul and the team committing same loses either the point or the serve.
- A foul is also scored if the cord line becomes entangled around any part of a player's body, causing a hindrance or stopping of play.
- A cord line wrapping around a net post constitutes an out-of-play situation and no penalty is involved.
- A game may consist of 15 or 21 points or any other total agreed upon.
- A team may consist of two, four, six or more players as desired.

Modifications to these rules include shortening the cord line or length of net and wire cable to fit the available play area. In addition,

stops may be placed at any point along the wire cable to permit a limited area in which the ring attachment can ride. (In small ships this may be necessary to prevent the ball from hanging over the side.)

To date, 11 of the 13 type commanders have evaluated captive volleyball and six of them were in favor of adopting it, while five were not. In reviewing the remarks, it was most interesting to note that COMCRUDESPAC endorsed the program wholeheartedly while his Atlantic counterpart disapproved of it. On the other hand, COMSERVLANT gave it his OK while COMSERVPAC rejected it.

Here are some of the comments received from other type commanders:

COMMINPAC — Recommend adoption . . . the only ship for evaluation in CONUS at this time was one LST. It was received very well by crew members.

COMMINLANT—Not recommended . . . considered "incongruous" because of limited space on MINLANT ships.

COMSERVPAC—Not recommended . . . lack of space; does not hold players' interest; too warm below decks to play captive volleyball. Consider captive volleyball not adaptable for ships with limited space.

COMSERVLANT—Recommend adoption . . . regular rules utilized; played with four, five and six players on each team. Lengthened line from recommended 30 feet to 35 feet. Great deal of enthusiasm by players and spectators.

COMPHIBPAC—Recommend adoption . . . not recommended for playing while underway; otherwise game received with enthusiasm. APAs, AKAs, AGCs and LSDs have an excellent 20 x 30 foot playing area.

COMPHIBLANT — Recommend adoption . . . LSTs and LSDs have excellent playing area. The game is highly adaptable for shipboard use. Recommend that if ball becomes unplayable by extending the full length of cord while above playing height, the point should be replayed.

COMCRUDESPAC — Recommended . . . all ships received the game enthusiastically and crews expressed great interest. In destroyer type ships, however, rules and playing area were modified. Team membership was limited to three. In clut-

tered playing areas on small ships underway, players were not permitted to move right foot when ball was in play.

COMDESLANT—Not recommended . . . Space aboard not suitable and safe to contain the game. Captive volleyball could be used ashore if no other facilities were available.

COMCRULANT — Highly recommended . . . a lightweight line, three feet longer than recommended was used. Original line restricted flight of the ball. Over-all evaluation: *Satisfactory.*

Take these remarks for what they are worth. As you see, some endorsed the captive volleyball game while others did not. If you feel that this game will increase recreational opportunities aboard your ship, then talk to your Special Services Officer or your recreation committee and see if they will take steps to buy a kit. The Bureau will not distribute any more of them. They made the initial distribution for evaluation purposes only. Hereafter, if ships desire captive volleyball equipment they must purchase it. All of the equipment needed for captive volleyball costs under $20 and may be purchased from almost any sporting goods store.

LITERALLY AND FIGURATIVELY, the Navy Mark I Shooting Kits created quite a bang throughout the Fleet. The majority of the activities receiving them were impressed and recommended adopting them.

Each kit contained two .22 caliber air rifles, two pistols, bell targets, three packages of 216 "powerlets" (CO^2 cylinders); two packages (6000) pellets; paper targets and spare parts.

The Bureau distributed 17 of these kits. Four of them were sent directly to ships—USS *Glacier* (AGB 4), USS *Firedrake* (AE 14), USS *Boston* (CAG 1) and USS *Altair* (AKS 32)—while the remainder were distributed to various fleet commands.

Here's what some of the commands receiving kits had to say:

USS *Point Defiance* (LSD 31)—Performance and accuracy of both the pistols and rifles are considered to be excellent for short range target use. Plans are being made to set up a target range in the well deck of this ship and to organize firing teams, possibly on a competitive divisional basis.

USS *Paul Revere* (APA 248)—It is recommended that firing be conducted in a relatively unobstructed area such as a ship's hold. It was discovered that the metal pellets will ricochet off metal surfaces when firing at close ranges. This effect can be compensated for if the target frames are backed up by a canvas curtain or by mattress padding.

Although the kit contains low velocity, pellet-firing air rifles and pistols, they must be considered "deadly weapons" when used at close ranges. The firing area on board ship should be treated as though it were a small arms indoor firing range and appropriate "live firing" safety regulations should be established and strictly enforced to prevent injuries to personnel in the area.

USS *Hugh Purvis* (DD 709)—The best utilization of the kits would be as a recreational facility used on the fantail while underway on extended cruises. During in-port periods, personnel do not seem to show much interest in the guns because adequate space does not exist on a destroyer to set up a safe firing range.

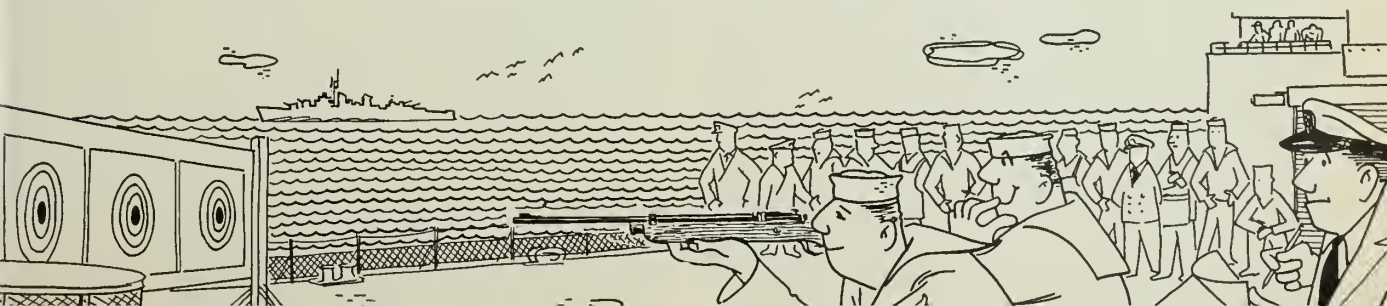
COMPHIBLANT—A group of officers and 50 enlisted men fired about 5000 rounds during informal, individual and group shooting. It provided real enjoyment, good training at reasonable cost and relative safety. The Navy Mark I Kits are a definite aid to shipboard morale. They provide a good competitive sport with some military value, in a restricted area. All agreed that this activity must be closely supervised; that the same basic principles of shooting a high caliber weapon be used; that these pellet guns be made available for purchase by ships' recreation funds; that ships stimulate and encourage use, competition and interest in rifle and pistol shooting.

USS *Sellstrom* (DER 255)—We have found these kits to be useful for recreation purposes during periods when the sea is calm and holiday routine is in effect. Owing to the potential danger involved, it is recommended that an officer or responsible petty officer be present at all times when these weapons are being used and that such use be strictly supervised.

USS *Betelgeuse* (AK 260)—The Navy Mark I Kit was received on board and assigned to the gunnery department for maintenance. All interested shooters are checked out by the gunner's mates in the safety precautions necessary when using charged carbon dioxide cylinders. Thereafter, any person who has been checked out in the safety precautions is permitted to draw the equipment from the armory after working hours and use it on the fantail while the ship is at sea. The target frame is bolted to the fantail railing.

This equipment has been enthusiastically received by the crew of *Betelgeuse* and has been in use nearly every afternoon after working hours when the weather permitted. The supply of pellets was exhausted in about four weeks and it is planned to obtain an additional supply using the ship's recreation funds. There have been no casualties to personnel or equipment and many pleasant hours of entertainment have been enjoyed.

Again, take these comments for what they are worth. Maybe they will also be of some benefit to you. These Navy Mark I Kits—complete with two rifles, two pistols, and an ample supply of targets, power cylinders, pellets and spare parts—cost slightly less than $100. If you're interested in purchasing one of them for your ship, write to the Chief of Naval Personnel (Attn: Pers G11) for details.



SONAR STUDENT enjoys skin diving in clear Florida waters. *Right:* Member of school's pistol team 'sharpens' eye.

A Weekend in Florida

"WHAT TO DO ON LIBERTY this week end?" Have you ever asked yourself that question? Sure you have—and so have many other sailors from time to time. Planning a good liberty can at times be rather difficult. However, if you are sports-minded and stationed at the Fleet Sonar School, Key West, Fla., your problems are solved.

The recreational facilities at this Fleet establishment have been designed to help its staff and students to have a better liberty, and money is not a factor. In fact most of the recreational facilities at this sunny spot are free. Taking advantage of the sunny-warm weather of this island, the school's Commanding Officer, Captain G. R. Reinhart, USN, has helped expand

RECREATION includes archery and basketball. *Above:* School's executive officer, athletic director talk about new gear.

SOFTBALL, fishing and judo classes (below) help students and instructors relax at Key West Sonar School.

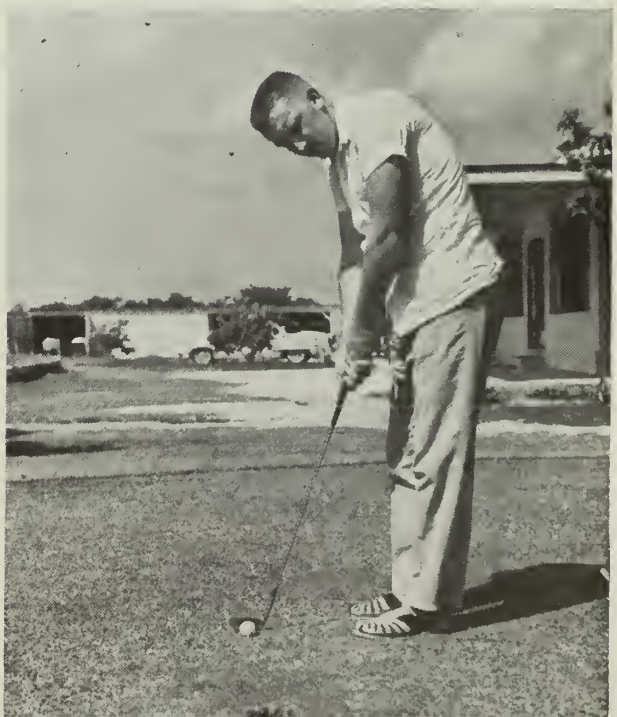
Courtesy of the Navy

its athletic facilities until they have become a very important factor of every man's life.

Athletic director, Chief Sonarman Charles "Dutch" Schultz has gathered together a vast array of athletic equipment and has developed the facilities on which to use them, as well as having a good staff of coaches to instruct and train. In belief that being a part of a team is the best way for one to learn how to live and work with people, the school has a large intramural sports program in a great variety of sports.

Included in the sports available to sonarmen stationed at Key West are football, softball, basketball, volleyball, golf, skin diving, swimming, tennis, gun clubs, and judo. —Holman D. King, YN2, USN.

SPORTS APLENTY at sonar school. Bowling and golf equipment is available for relaxing during off duty hours.



Sea-Going

LIKE STATISTICS? Here's one for you: In fiseal year 1958 about one and one-fourth million books were distributed to the Navy and Marine Corps through the Naval Library Program. If these were put in a single bookease—four feet wide and with enough shelves to hold them all—a fall from the top of the case could be quite painful.

Fortunately, this isn't likely to happen, for in the Navy books are too much in demand to be kept in one place and forgotten.

Navymen read—and they read plenty.

They read to improve their chanees of advaneement or promotion. They read when they want to find out how to do something—whether it's skin diving or taking a plunge in the stock market. They read naval histories, literary elassics and books on mathematics, physics, electronics and nuclear energy. They read when they want to settle a disputed point that comes up while they're batting the breeze. And, of course, they read just because they like to.

This widespread interest hasn't just happened. It has been created. There is no such thing as a standard "paekaged" library. The number and type of books required vary greatly from one ship or station to another, and a volume which might be suitable to a destroyer operating out of Newport would hold little interest for airmen at Atsugi.

Wherever Navymen serve, you'll find a nearby Navy library carefully tailored to fit the needs and interests of its readers. In Port Lyautey, there will be a wide variety of books on Moroeco and the Med. Yokusuka will be light on Europe but rieh in volumes describing Japan, its culture, arts and history. Everywhere, you will find books and material on new developments, international relations, fact and fiction.

This interest in reading is not just a fad, for sea-going men have been making good use of books and libraries ever since the Navy began. The

ANCHOR MAN—Sailor gets in a little reading during wait for paint while his ship is moored at Pearl Harbor.

Libraries: The World's Best

early book collections consisted almost entirely of volumes designed to assist in the performance of professional duties. However, as far back as the early 1820s, uss *Franklin*, a 74-gun ship-of-the-line, boasted books for both officers and enlisted men.

Just before the ship, under COMO Charles Stewart, sailed for a three-year cruise in the Pacific, William Wood, a New York philanthropist, addressed the crew on the subject of a "Seaman's Library." His talk was greeted with such enthusiasm that the officers and men contributed about $800 to get one started, and some 1500 books were bought. COMO Stewart promptly set aside a compartment aboard *Franklin* as a library and appointed a librarian.

When the ship returned to New York in 1824, what was left of the book collection was turned over to the Brooklyn Navy Yard to become the nucleus of a Seaman's Library there.

Four years after this the Navy Department published a list of books which "will be furnished for the use of vessels of war when on a cruise, and for the use of Yards." The books were to be bought "at public expense."

This list was modified from time to time. In 1831 it included 36 books —among them Bowditch's *Navigation*, Marshall's *Life of Washington*, Botta's *American Revolution*, Jacobson's *Sea Laws*, Franklin's *Voyages*, *The Life and Voyages of Columbus*, *Work on Conversion and Preservation of Timber*, and the Bible and Prayer Book.

Through the years the list grew and grew. However, as late as 1886 shipboard libraries were still intended primarily for officers, although they could be loaned also to the petty officers and men.

By the 1890s the situation had changed, and there were books for the entire crew. In addition to the professional "ship's library," there was a "crew's library." (Nowadays, except for "administrative books" regularly used in certain offices, there is just one collection of books for the entire ship, and volumes in it are usually rotated from one part of the ship to another, so that everyone gets a chance to use them.)

THE NAVY DIDN'T really get modern library service for its ships and stations until World War I, when an office for centralized administration of the library program was organized. This office—now the Library Services Branch of the Special Services Division, Bureau of Naval Personnel—still administers the program today, setting up and maintaining libraries ashore and afloat throughout the Fleet. The Branch's "customers" range from mine and patrol craft, which have room for only a handful of standard references, to large training centers whose collections may number 60,000 volumes or more.

Most of the money for these books comes out of appropriations available to the Chief of Naval Personnel. Library quarters, furnishings, equipment, supplies, maintenance costs and the salaries of librarians at large shore stations are provided for by funds appropriated for the maintenance of ships and stations.

In addition, with the approval of the Recreation Council and the local commanding officer, ship or station recreation funds may be used to

AT SEA OR ASHORE Navy's Library Service furnishes variety of reading. Here, men relax at shore-based library.

READING FOR FUN or facts Navymen on cruise spend many hours availing themselves of their ship's library.

purchase certain specialized library gear or additional books. Magazines, newspapers and phonograph records are also bought with money from the local recreation fund.

To get things started, the Library Services Branch sees that each new ship or station receives a basic assortment of all kinds of books plus a continuing supply of newly published books to keep the collection up to date. The number of volumes in an initial collection is figured on a basis of one-and-one-half books per man aboard ship, or a minimum of two books per man at shore stations.

When books in the initial collection are worn out, replacements are requested from the Chief of Naval Personnel (Attn: Pers G-14), which is the address of the Library Services Branch. As might be expected, such old reliables as Knight's *Modern Seamanship*, Mixter's *Primer of Navigation* and Dutton's *Navigation* wear out in no time at all. For mail order service on professional books in the fields of naval and military history and strategy, leadership, management, international relations, diplomacy and government, the Navy maintains "Auxiliary Library Service Collections" at the Bureau and four widely scattered centers of naval activity.

In addition, the Library Services Branch, the district librarians at most naval district headquarters and the librarians at various stations and bases, furnish even the smallest libaries "big library service" by doing their best to answer all sorts of requests for books which are not available on a specific ship or station.

To give an idea of the nature and variety of these requests, here is a sampling of just a few of the many titles made available to readers within the past month or so:

For a submarine—*Elements of the Differential and Integral Calculus* and *Principles of Nuclear Reactor Engineering.*

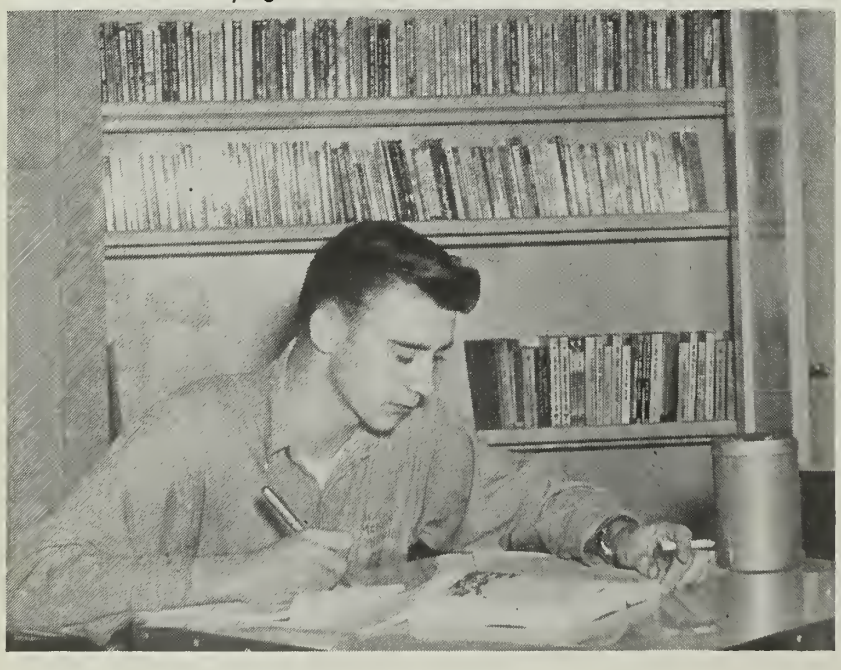
For another sub—*What Has Four Wheels and Flies?* and *The Watch Officer's Guide.*

To an auxiliary ocean tug—an auto repair manual, *The Encyclopedia of Sports* and *The Best of S. J. Perelman.*

For a fleet ocean tug—*Affair of the Exotic Dancer* and *Doctor Zhivago.*

To a DDR—*How to Plan a House*

STUDY TIME—Sailor at sea on ocean radar station ship uses library facilities while studying for an examination for advancement in rate.



NOT A FAD—Navymen have made good use of books for years as photo of present sailor and old timer illustrates.

and *Your Marriage—A Guide to Happiness.*

To a destroyer in the Far East—*An Introduction to the Arts of Japan.*

For a YAGR—*The Best of Taste —The Finest Food of Fifteen Nations* and *The Pig in the Barber Shop.*

Through years of experience at answering such requests as these, the people who work in the Navy library program have developed a sort of sixth sense about the sort of books that Navymen want. This, and the review of books by experts in everything from amphibious warfare to zither playing, enable the Library Services Branch to do an efficient job of selecting the new books which are regularly shipped out to ships and stations all over the world. Since many of the new titles are selected before their official publication dates, the Navyman overseas gets a chance to read new books almost as soon as the people back home do.

Hardbound books are sent out monthly, except to small ships—which are supplied semi-annually, and certain small stations—which receive their new material from the district librarians. Paperbacks are also issued at monthly intervals to ships and overseas stations, with the number issued depending on personnel allowances and funds currently available.

The people in the Library Services Branch seem to have a special knack for finding books of particular interest to Navymen, as is indicated by this list of recent purchases:

A Guide to Naval Strategy, Fourth Edition, Bernard Brodie.

Soviet Strategy in the Nuclear Age, Raymond L. Garthoff.

D-Day, David Howarth.

The Divine Wind, Rikihei Inoguchi, Tadashi Nakajima and Roger Pineau.

Arms and the State, Walter Millis.

History of U. S. Naval Operations in World War II, Vol. 12: *Leyte,* June 1944—*January 1945,* Samuel E. Morison.

Collision Course, Alvin Moscow.

The Soviet Navy, M. G. Saunders.

The Pulse of Radar, Robert Watson-Watt.

Nautilus 90 North, William R. Anderson and Clay Blair. Jr.

Antarctic Assault, Paul W. Frazier.

War Fish, George W. Grider and Lydel Sims.

The Ugly American, William Lederer and Eugene Burdick.

Service Etiquette, Bruce McCandless, Brooks Harral and Oretha D. Swartz.

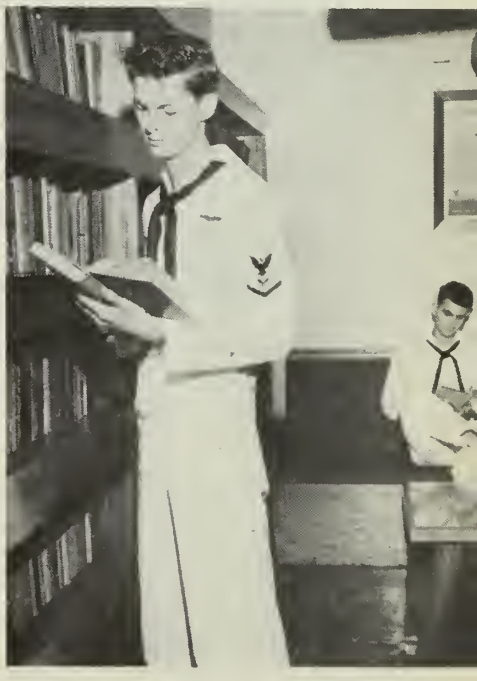
The Complete Book of Submarines, Charles W. Rush, W. C. Chambliss and H. J. Gimpel.

The library program doesn't end with the selection and distribution of books. Another equally important aspect is the professional assistance it makes available to even the smallest ship or station through district librarians and the people who run the libraries at large shore bases.

With this help, provided by experts, even a handful of books can be turned into something of value —and the skipper, the library officer and the enlisted library assistant can help make the library a success.

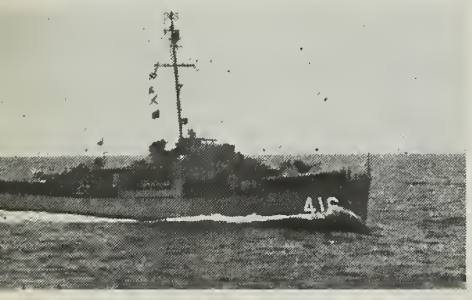
—Jerry Wolff.

THROUGHOUT the Fleet Navymen have spent many hours of spare time to build or improve library facilities.



USS Tingey (DD 539)

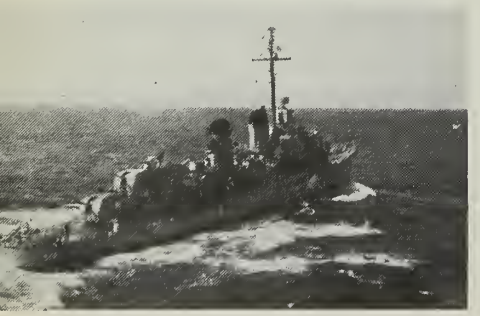
USS Alvin Cockrell (DE 366)



USS Melvin R. Nawman (DE 416)

USS Chester T. O'Brien (DE 421)

USS Laws (DD 558)



OFF TO SEA—Reservists man the lines during training cruise on their DE.

Recognize These Ships?

A NEW ERA in training and readiness began for many of the Navy's part-time sailors on 1 May 1958. That date marked the activation of Reserve crews in four DEs, the first of an ever-expanding roster of sea-going ASW-type ships assigned to the Selected Reserve.

As of this writing there are 30 DEs and six DDs, assigned as Selected Reserve ships. Others will be added as they become available.

The ships are manned by Naval Reservists—organized into Reserve Crews—and reduced complements of active duty personnel.

On one weekend of each month, the entire Reserve crew takes over the ship—steaming out to sea and engaging in ASW exercises. Then again, once a year, these same crews take their Active Duty for Training (AcDuTra) on board their Selected Reserve ships.

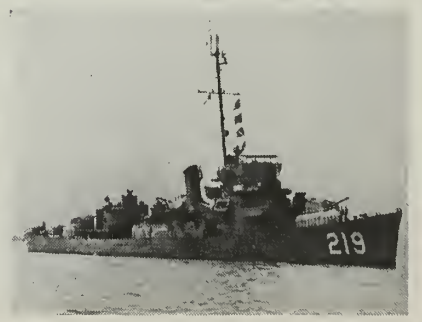
DEs assigned to the program are placed in an "in service" status. They have a full-time active duty allowance of two officers and 33 men. The DE Reserve Crew includes 10 officers; the allowance for steam-powered DEs includes approximately 165 enlisted Reservists while the allowance for diesel-powered DEs is approximately 150 enlisted Reservists.

DDs in the program remain in commission. Their active duty allowance consists of eight officers and 110 enlisted men. The Reserve Crew of a DD includes an allowance of 12 officers and 175 EM.

Reservists assigned to these Selected Reserve ships are pre-processed for mobilization. They have their orders to active duty and can report for duty within a few hours after the outbreak of hostilities.

In the event of mobilization, the commanding officer of the Reserve Crew becomes the CO of his ship

USS J. Douglas Blackwood (DE 219)



USS Colahan (DD 658)

ON TARGET—Cruises on Selected Reserve ships keep NRs squared away.

They've Got a New Job

and his exec takes over the number two billet. The active duty officer-in-charge and navigator of the Reserve DE becomes the operations officer; the active duty engineer officer remains in his billet. In the case of DDs, active duty CO and XO will be reassigned after turn-over period.

The training program is under the supervision of the Commander, Naval Reserve Training Command, who coordinates operations with the naval district commandants and elements of the active forces.

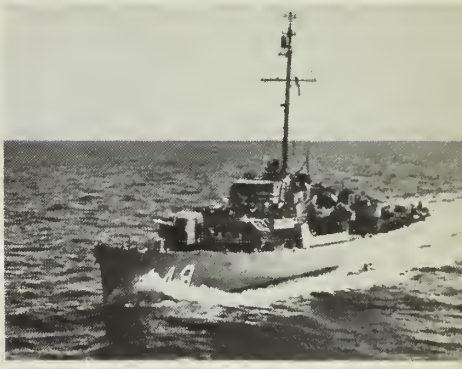
All the continental naval districts except ComNine are authorized to form DE divisions with an inactive duty Reserve captain as DE division commander. Reserve DE divisions may be organized when there are at least two DE Reserve Crews activated and the assigned DEs placed in an "in service" status with reduced active duty crews of two officers and 33 EM. Several naval districts have already formed DE divisions and scheduled joint training exercises.

The sea-going drills are held on the third weekend of each month so that training can be scheduled with other Selected Reserve ships and with submarine and air units—both active and Reserve.

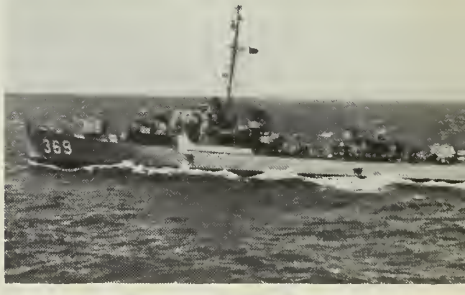
Sea-going drills are the rule for these hand-picked crews. Reservists stand watches in every department. When they are not on watch, they take part in departmental drills—with time out for chow and sack time, of course. While at sea, the ships engage in collision, man overboard, abandon ship and other drills. Firing exercises are also in the Plan of the Day.

Most of the ships assigned to the program were scheduled to join the mothball fleet before the Selected Reserve concept was inaugurated. Many had outstanding combat records in WW II and Korean conflict.

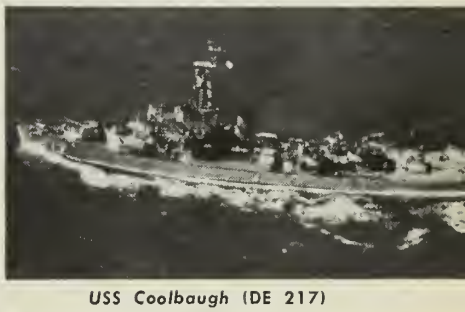
USS Loeser (DE 680)



USS Honno (DE 449)



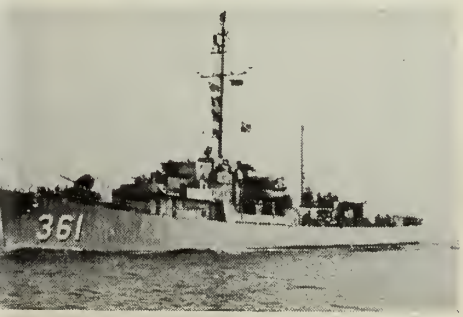
USS Thoddeus Porker (DE 369)



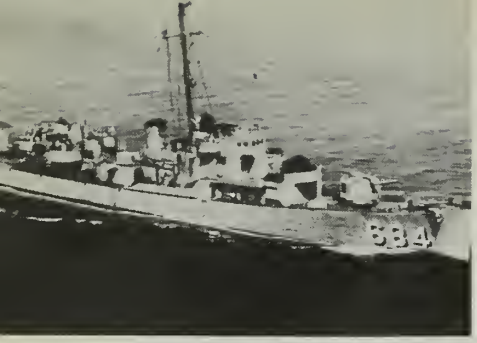
USS Coolbaugh (DE 217)

USS Tabberer (DE 418)

USS Walton (DE 361)



USS Howard D. Crow (DE 252)



USS *De Long* (DE 684)

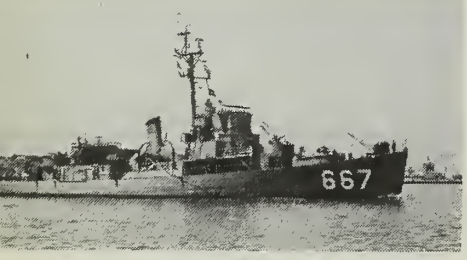
USS *Daniel A. Joy* (DE 585)

USS *Watts* (DD 567)

USS *Woodson* (DE 359)

USS *Marsh* (DE 699)

USS *Greenwood* (DE 679)



USS *Wiseman* (DE 667)

USS *Edmonds* (DE 406)

These ships, operating on a year-round basis, accomplish two objectives. First, Naval Reservists receive on-the-job training in the ships they'll man in the event of hostilities. Second, the ships themselves are ready for instant deployment for duty with the Fleet without any need for a demothballing period. Thus the active Fleet can count on these ships and their combined crews to strengthen the ASW forces if and when the need arises.

Here's a breakdown of currently assigned Selected Reserve ships, according to naval districts:

ComONE: USS *Raymond* (DE 341), USS *Melvin R. Nawman* (DE 416), USS *Tills* (DE 748).

ComTHREE: USS *De Long* (DE 684), USS *Coates* (DE 685), USS *Thaddeus Parker* (DE 369), USS *Albert T. Harris* (DE 447), USS *Chester T. O'Brien* (DE 421).

ComFOUR: USS *J. Douglas Blackwood* (DE 219), USS *McClelland* (DE 750), USS *Tabberer* (DE 418), USS *Sigourney* (DD 643).

ComFIVE: USS *Loeser* (DE 680), USS *Darby* (DE 218), USS *Robert F. Keller* (DE 419).

ComSIX: USS *Coolbaugh* (DE 217, USS *Greenwood* (DE 679), USS *Tweedy* (DE 532), USS *Clarence K. Bronson* (DD 668).

ComEIGHT: USS *Woodson* (DE 359), USS *Howard D. Crow* (DE 252).

ComNINE: USS *Daniel A. Joy* (DE 585).

ComELEVEN: USS *Colahan* (DD 658), USS *Marsh* (DE 699), USS *Wiseman* (DE 667), USS *Tingey* (DD 539), USS *Hanna* (DE 449).

ComTWELVE: USS *Naifeh* (DE 352), USS *Alvin Cockrell* (DE 366), USS *Laws* (DD 558), USS *Walton* (DE 361).

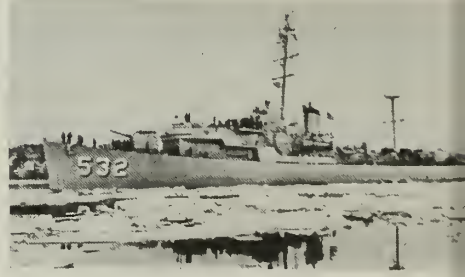
ComTHIRTEEN: USS *Whitehurst* (DE 634), USS *Watts* (DD 567), USS *Charles E. Brannon* (DE 446), USS *McGinty* (DE 365), USS *Edmonds* (DE 406).

You'll hear more of these Selected Reserve ships in future months.

USS *Coates* (DE 685)

USS *Whitehurst* (DE 634)

USS *Sigourney* (DD 643)



USS *Tweedy* (DE 532)

USS *Naifeh* (DE 352)

A Report on the Ocean Wave

IN FEBRUARY 1933, USS *Ramapo* (AO 12), proceeding from Manila to San Diego, ran into seven days of stormy weather.

During the height of the storm *Ramapo* was running down wind and with the sea. Gusts reached 68 knots. While standing on the bridge, one of the officers saw a great sea rising astern to a level above an iron strap on the crow's-nest. *Ramapo* was on an even keel and at that moment, her stern was in the trough of the sea. Thus, it was possible to take an exact line of sight from the bridge to the crest of the wave.

Mathematical calculations based on the dimensions of the ship gave the height of the wave. *It was 112 feet.*

Most *wind waves*, say those who should know, rarely exceed 25 feet. However, there are two other types about which no predictions can be made —the *seismic sea wave*, caused by an undersea earthquake; and the really unusual *storm wave*. The former is generally known as the so-called "tidal" wave but it has nothing to do with the tide.

The seismic sea waves—also known as *tsunamis*—are frequently responsible for some of the greatest disasters known to man. One of the earliest such waves recorded occurred on the eastern shores of the Mediterranean in 358 A.D. It passed completely over islands and low-lying shores, depositing boats on the housetops of Alexandria and drowning thousands of people.

In 1946, bathers in Hawaii were startled when the water suddenly withdrew from the beaches. Moments later, it returned as though the tide were rising. But no tide came in like this. The rise carried the water 25 feet above normal. The water withdrew, then returned.

What had happened? Five hours earlier, an earthquake had taken place on the steep slopes of a trench off the Aleutian chain, more than 2000 miles away. In the open ocean, the waves created by the earthquake would hardly be noticed. They were only a foot or two high but their length was enormous—about 90 miles between crests. As the Aleutians are just about 2300 miles from Hawaii, and it took five hours for the waves to arrive, they must have been travelling at 470 miles an hour. They struck Valparaiso, Chile, a distance of 8000 miles, 18 hours after the earthquake.

Storm waves are connected with hurricanes and, although they are more or less comparable to the usual wind waves, they are usually accompanied by a rise of the general water level. A hurricane wave is reported to have destroyed 20,000 boats and drowned some 300,000 people in the Bay of Bengal in 1737.

Fortunately, such waves are out of the ordinary. As long as there has been a sea there have been winds to stir it and, with the winds, there have been waves.

While there is still much to be learned about it, we can still give a few names to the anatomy of the typical wave. An ordinary wind wave has *height:* the distance from from trough to crest. It has *length:* the distance from one crest to another. The *period* of a wave refers to the time required for crests to reach a given point. The water in a wave doesn't travel with the wave, nor does it stand still. It rolls and tumbles and then, more or less, returns to the same point from which it started. The *fetch* is the distance a wave has traveled. The greater the fetch, the higher the wave—up to a point.

In the Southern Ocean of the Antarctic, where absence of land masses permits waves to roll all the way around the world, waves are customarily no higher than those found in any other large body of water.

Nevertheless, storm waves may grow twice as high, and, if a full gale blows long enough in one direction, to have a fetch of 600 to 800 miles, they may become still higher. The maximum possible height of a wave is, like the maximum possible roll of a ship, a much debated question. Textbook authorities are inclined to place the maximum height at about 60 feet. Mariners, while willing to concede that a wave appears much higher from a bridge or deck during a full gale than it does from a desk or armchair, insist that they can, and do, go higher.

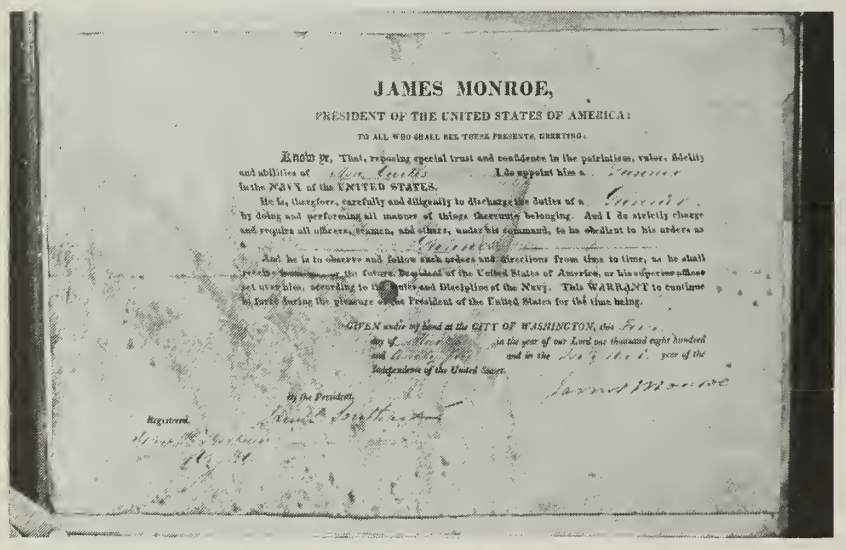
Fortunately, waves have their enemies, too. Swells on their way from Iceland to Africa are flattened by the Atlantic trade winds. Banks and shoals exert their drag and tend to slow, then flatten the open sea winds. Ice, snow and rain, under proper conditions, may knock down a sea. And, of course, a drop in the wind—or no wind at all—means less waves.

One further type of wave must be mentioned in this brief resume—the *submarine wave*. For some reason not fully understood, currents of varying temperatures or, perhaps salinity, create at their meeting places waves similar to their counterparts on the surface.

But these waves—some of them—are enormous, some reaching a height of 120 feet. Submarines are tossed about just as surface waves roll and toss the subs' hunters and, on occasion, these waves have been known to throw submarines up out of the water. It has been theorized that these internal waves may "break" just as shoaling water waves do, but there are no firsthand observations of this phenomenon.

We have no conception of the effect these underwater waves may have on fishes and other deep sea life. That's one more question to be added to the others about the mysterious underwater world.

DAYS OF YORE—*USS Constitution* defeats British Guerriere in War of 1812.



JAMES MONROE,

PRESIDENT OF THE UNITED STATES OF AMERICA:

TO ALL WHO SHALL SEE THESE PRESENTS, GREETING.

KNOW YE, That, reposing special trust and confidence in the patriotism, valor, fidelity and abilities of [illegible] I do appoint him a [illegible] in the NAVY of the UNITED STATES.

He is, therefore, carefully and diligently to discharge the duties of a [illegible] by doing and performing all manner of things thereunto belonging. And I do strictly charge and require all officers, seamen, and others, under his command, to be obedient to his orders as a [illegible]

And he is to observe and follow such orders and directions from time to time, as he shall receive from me, or the future President of the United States of America, or his superior officer set over him, according to the Rules and Discipline of the Navy. This WARRANT to continue in force during the pleasure of the President of the United States for the time being.

GIVEN under my hand at the CITY OF WASHINGTON, this [illegible] day of [illegible] in the year of our Lord one thousand eight hundred and [illegible] and in the [illegible] year of the Independence of the United States.

James Monroe

By the President,

[illegible]

Registered.

FOR THE RECORD—Papers contained gunner's warrant signed by President Monroe. *Below:* Gunners of Curtis' time.

Sailor of the

THANKS TO Mrs. Mabel Knight of Harrisburg, Pa., a priceless bit of the Navy's past has been rescued from the trash-pile.

Mrs. Knight, a nurse with the armed forces in World War I, salvaged the papers of Asa Curtis, who fought in uss *Constitution* during the War of 1812 and in uss *Independence* in action against the Barbary pirates. She presented the brittle, yellowing documents to LCDR Joseph G. Nemetz, of the Naval and Marine Corps Reserve Training Center at Harrisburg, so that he could turn them over to the Navy Department.

The papers, handed down among Curtis' descendants, had been in the possession of the old sailor's great-great-great granddaughter, who died recently in Philadelphia. Mrs. Knight, a friend of the Philadelphia woman, went to her home in connection with the will. While there she spotted "a big box of stuff about to be moved to the curb as waste."

"Something made me take a closer look," she says, "and I'm glad I did."

In the box of "trash" were such irreplaceable items as a letter Curtis had written on 24 Oct 1836 in connection with a pension application. The letter states in part:

"I entered the service as Seaman and joined the Frigate *Constitution* in May 1812. I was under the command of Cmdr. Hull. I was in *Con-*

War of 1812

stitution when she was chased by the English Squadron off New York. I was in her when she captured the Frigate *Guerriere* . . . I was with Cmdr. Bainbridge when he captured the Frigate *Java* after which he rated me quarter gunner, and when Cmdr. Stewart took command of *Constitution,* Cmdr. Bainbridge wished me to remain with him in the Navy Yard at Charlestown, Mass., and he made me gunner of gunboat No. 85 where I remained until *Independence,* ship of the line, was fitted for sea. . . .

"I then sailed as gunner's mate in *Independence* with Cmdr. Bainbridge against Algiers in 1815."

A letter from sailing master Michael Clean tells how Curtis won his quarter gunner rating in the fight with *Java.* Written when Curtis was applying for appointment as a warrant gunner, it states:

"I do hereby certify that Mr. Asa Curtis was shipmates with me aboard the U. S. Frigate *Constitution* during the last war at the capture of the British Frigate *Guerriere* and *Java.* . . . During the hottest of the fight with *Java* he ascended the Foretop Gallant stay to rebend the flying gib Halyards which had been shot away, and I believe by that act of his he greatly tended, by keeping headsail on the ship, in capturing the enemy."

Among the other items in the

Gunner Asa Curtis

collection are lists of Navy circulars handing down old regulations, such as one to the effect that only the captain himself could deprive a Navyman of his rum ration. There are also details of *Constitution's* measurements, a technical discussion of the merits of various naval guns and a report that somebody had tampered with the guns of Curtis' ship while it was in the Gulf of Naples. There are details of Curtis' clothing, almost to the last button.

And, carefully preserved in a frame, there is a document dated 1 Mar 1825, which starts out:

"Know ye, that, reposing special trust and confidence in the patriotism, valor, fidelity and abilities of Asa Curtis, I do appoint him as a gunner by doing and performing in the Navy of the United States . . . ."

It is signed, "James Monroe, President of the United States."

—Jerry Wolff.

PAPERS saved by Mrs. Knight and presented to LCDR Nemetz (below) tell of Navy way of life in the 1800s.

GREAT NAMES—Crew members of *Constitution* prepare for battle with *Guerriere. Rt: USS Independence* in action.

LETTERS TO THE EDITOR

Standing OOD Watch

SIR: Is there anything in *Navy Regs* which authorizes the CO of a ship to appoint a Supply Officer (staff officer) as a qualified Officer-of-the-Deck underway watchstander?—W. E. C., III, ENS, SC, USNR.

• *It is not naval policy for Supply Officers to be appointed underway OODs. However, since there is nothing in Navy directives to prohibit it, certain outstanding officers may be given OOD responsibilities in addition to their normal supply duties.*

Article 1003.1 of "Navy Regs" states that: "Subject to such restrictions as may be imposed by a senior in the chain of command, or by these regulations, a commanding officer may assign to duty in charge of a watch, or to stand a day's duty, any commissioned or warrant officer who is subject to his authority and who is, in the opinion of the commanding officer, qualified for such duty."

As that paragraph would indicate, it is possible that Fleet or type commanders may have rulings of their own on the subject.—ED.

Ship's Main Battery

SIR: The crew of this *Fletcher*-class destroyer is about the same as that aboard any other Navy ship. They devote a lot of their time to bull sessions.

During these "training periods," there's always a continuous battle between the TMs and GMs as to just what the main battery of this ship really is. Some say that the Mark 14 *Hedgehog* is, others say its our Mk-35 torpedoes and still others say its our 5-inch 38 battery.

We have searched through all available books and manuals and have not been able to solve this battle problem. Therefore, we are asking you to come to our rescue and settle this matter once and for all —we hope! —The Gunnery Gang, USS *Renshaw* (DDE-499).

• *While you scan the horizon in anticipation of our arrival, take a break and refer to "Naval Ordnance and Gunnery" (NavPers 16116-B). On page 321, you'll find the answer. It states that the main battery consists of the largest caliber guns aboard a ship.*

Since the guns of largest caliber on USS Renshaw *(DDE 499) are 5-inch 38s, they are the main battery. The* Hedgehogs *and torpedoes comprise the secondary battery.*—ED.

This section is open to unofficial communications from within the naval service on matters of general interest. However, it is not intended to conflict in any way with Navy Regulations regarding the forwarding of official mail through channels, nor is it to substitute for the policy of obtaining information from local commands in all possible instances. Do not send postage or return envelopes. Sign full name and address. Address letter to Editor, ALL HANDS, Room 1809, Bureau of Naval Personnel, Navy Dept., Washington 25, D. C.

Decision Pending

SIR: I am wondering if there is any provision regarding retainer pay for members of the Fleet Reserve who were serving on active duty at the time Public Law 422 was passed.

I transferred to the Fleet Reserve 5 Jan 1953 and remained on active duty until I was released 25 Jun 1958 with 26 years' active duty for time and pay purposes. My retainer pay, based on the old pay scale of $335.40, would be $231.09 which includes the six per cent. On the new pay scale, my retainer is a flat $227.50.

Had I been released before 20 May 1958 my retainer would have been greater than at present. Has any provision been made to protect the few in my position?—A.T.B., MEC, USNFR.

• *Section 3(b) of Public Law 85-422 carries the proviso under which you fall. It says that members of the Fleet Reserve or retired members, released from active duty after 1 Jun 1958 who served a year or more on active duty since date of transfer to the Fleet Reserve or date of retirement, will have their retainer or retired pay computed on the basis of the rates of pay provided in this law. This, we realize, has meant a loss of pay to certain men, including yourself.*

The question has been submitted to the Comptroller General for a decision. It involves: (1) whether it is mandatory that Fleet Reservists' pay be computed on this basis, or (2) whether they can elect to receive retainer or retired pay computed under the old pay bill plus the six per cent increase provided by section 4(a) of the law.

As you must realize, pending the Comptroller General's decision, retainer or retired pay must be computed on the new pay bill. If the decision, when made, provides that members have their pay computed on the basis that is to their advantage, you will be entitled to an adjustment of pay.—ED.

A Good Leadsman, Then and Now

SIR: While looking through the 1946 edition of the *Bluejacket's Manual* I came across the sentence, "A good leadsman will get reliable soundings up to seven fathoms."

This reminded me of these lines in "The Rime of the Ancient Mariner," by Samuel Taylor Coleridge—

"Of the Spirit that plagued us so:
Nine fathom deep he had followed us."

Do you perchance know what was considered normal speed for a 17th century merchantman, and what would have been the limit of reliable soundings at this speed?

Could the spirit in the poem have been beyond the normal soundings?—Robert C. Erwood, AT3, USN.

• *As we have said many times before, the best way to find the answer to an offbeat question is to ask our readers. However, since there must be something that even* THEY *don't know, perhaps this question will be the first to stump our vast panel of experts.*

Whaddya say out there? Have we finally got a query that has you snowed? Or, will someone pipe up with, "Why that's easy," and rattle off the answer with one hand while he is shooting (with camera) an albatross with the other?

We'll soon see—we hope.—ED.

Change in Rating

SIR: I have read BuPers Inst. 1440.18B and understand that, if I am not in one of the source ratings, I could not request a change of rating using this Instruction as a reference. Is this correct? If so, is there any way I could request change of rating from yeoman to electronics technician without referring to this Instruction? My marks are GCT 69, ARI 66, MECH 61, CLER 54 and ETST 67. I sincerely think that I would be of greater value to both the Navy and myself if allowed to change my rating.—J. D. C., YN2, USN.

• *Formal school or "in-service" training to prepare a man for change in rating will normally be provided. But this is only for those who are in a "source" rating and who are requesting one of the "short" ratings. These are listed and defined in BuPers Inst. 1440.18B.*

Since you are not in a "source" rating, you do not fit this pattern. The only other way you can change your rating is if you are qualified in accordance with BuPers Inst. 1440.5B. If so, you may request authority to be examined for change of rating under provisions of that instruction.—ED.

LDOs Reverting

SIR: If an LDO is required to revert to his former enlisted status will he revert to E-7, or have provisions been enacted for the automatic advancement to E-9 of a permanent E-7 who is now serving as a temporary LDO?

Do regulations permit permanent E-7s who are serving as LDO(T) to compete for E-8 or E-9?—F. J. W., ENS, USN.

• *If an LDO(T) is required to revert to his former enlisted status, he would revert to pay grade E-7 or the highest rate that he held. No provisions have been made or are currently being considered in regard to administrative advancements to E-8 or E-9 for temporary commissioned and warrant officers.*

Temporary officers and warrant officers are not permitted to participate in E-8 and E-9 examinations.—ED.

Globe-Trotting Taluga

SIR: In a Taffrail Talk item in your February issue, USS *Essex* (CVA 9) asked if her steaming mark of 53,000 miles in seven and one-half months was a record.

Essex should be advised that she might qualify as champ of the "Pond Lilies," but she is not even in contention for the heavyweight title.

In March 1947, at San Francisco, Calif., I was assigned command of USS *Taluga* (AO 62), which was then attached to the old Naval Transportation Service (NTS). The United States was in the midst of an oil shortage and Navy tankers were being used to help relieve it.

Between 15 Mar 1947 and January 1948 we steamed over 90,000 miles. This was the itinerary for our 10-month globe-trotting voyage—San Francisco to Pearl Harbor, T. H.; Pearl to Persian Gulf; Persian Gulf to Yokosuka, Japan; Yokosuka to Singapore; Singapore to Persian Gulf; Persian Gulf to Tangier, Morocco; Tangier to Norfolk, Va.; Norfolk to Key West, Fla.; Key West to Persian Gulf; Persian Gulf to Tangier; Tangier to Norfolk; Norfolk to Persian Gulf; Persian Gulf to Yokosuka; and finally, from Yokosuka to Bremerton, Wash., for a three-month overhaul.

Singapore and Tangier were 48-hour layover ports for liberty. The Pearl and Key West stops were less than 24 hours for discharge of diesel or drummed cargo. Terminal stops on the Persian Gulf were usually two to five days, depending on the number of tankers waiting to be loaded. The stops at Norfolk and Yokosuka usually lasted five days, although the ship was once granted two weeks for voyage repairs.

Taluga transited the Suez Canal four times during the 10 months.

I do not know if her 10-month odyssey gives her any claim to a championship, for other NTS tankers were on a similar schedule. I do know that: we received mail about once every six weeks; all shipyards had orders to work on NTS tankers around the clock to get them out; and we sailed when RFS, whether it was Sunday or not.

The crews of these ships only averaged about 110 men per ship and they were all real sailormen.

Because our crews were so small we couldn't spare anyone for PIO duties. Perhaps that's why the feats of the NTS tankers during the oil shortage didn't receive as much notice as they deserved.—G. L. Raring, CAPT, USN.

• *We don't think* Essex *will demand a recount. But, from what we know of our readers, we'd say you can probably expect a few challenges.*—ED.

PATCH WORK—COMSECONDFLT men get ready to sew command identification patches on board Second Fleet Flagship *USS Northampton* (CLC 1).

Evaluation Marks

SIR: Can a commanding officer change the Enlisted Performance Evaluation marks assigned by his predecessor or those given by a commanding officer of another ship or station?

The reason I ask is that on 16 Nov 1957 and again on 16 May 1958, I recevied 4.0 in professional performance, military behavior, leadership, military appearance and adaptability. But on 24 Jul 1958, just before I took the E-9 exam, some of my marks were lowered. Since the present commanding officer took command 1 Jan 1958, I feel that my marks for 16 Nov 1957 should not have been lowered.—T. W., YNC, USN.

• *A change of Enlisted Performance Evaluation marks after initial entry can only be made in accordance with Article B-2307(3) of the "BuPers Manual." This states in part, "Except as provided in article C-7821(8)(a) and C-10407, performance of duty marks (page 9) shall not be changed without prior approval from the Chief of Naval Personnel."*

The Board for Correction of Naval Records may be petitioned for a correction of your record.—ED.

Warrant Operations Technician

SIR: I am very much interested in the new warrant officer designation of Operations Technician. Can you set me straight on what material I should study for this grade?—L. A., RM1, USN.

• *About the best that we can recommend is for you to check into the qualifications for Operations Technician. These are listed in Change 1 of the "Manual of Qualifications for Warrant Officers" (NavPers 18455).*

The recommended study material for the test (General Knowledge Test-OSB) is contained in BuPers Inst. 1560.12.—ED.

Enlisted Correspondence Courses

SIR: The education officer on board requires that all Navy Enlisted Correspondence Course assignment booklets be turned in to him for destruction before he will give a man credit for that course. Is this proper procedure?—J. L. M., AT1, USN.

• *Since your education officer sets this down as a requirement it sounds to us something equivalent to an order. If you want to go further into the subject, here's another answer.*

Under the provisions contained in BuPers Inst. 1510.67A of 24 Jan 1958, each assignment you complete is graded and counsel given if you need it.

Administration of the course is normally your division officer's responsibility. When you complete the course, someone in your command will recover the course textbook and return it to the Naval Correspondence Course Center. The answer keys will be destroyed. The assignment booklet may be retained on board until you complete your training cycle, or it can be destroyed. It's all up to the discretion of your CO—ED.

GET THE POINT—Tack spinners of Fighting Squadron Sixty One gather round playing field as members seek to better record of 71.9 seconds.

Tack-Spinning Squadron Is Sharp, Rests on Its Laurels

SIR: When in the course of human events it becomes evident that the status quo leaves something to be desired, red-blooded men will always rise to set a new standard and proclaim that THEIR standard is superior to all others.

The world-wide reaction is spontaneous and completely unanimous. A challenge has been issued. It must be answered! We refer to page 45 of the January 1959 ALL HANDS announcing the All-Navy tack-spinning champion.

As soon as our squadron had been canvassed for the perfect tack, selected on the basis of shaft length, symmetry of head, and stability of spin, the program was organized.

A practice board for beginners was set up and the dimensions of the spinning arena defined. Rules were promulgated and a timing board established.

With a nominal amount of practice, a sizable number of men in the squadron were readily qualified, using the criteria of 40 seconds which was established in your interesting account.

Then the time trials began, using only the standard MK I, MOD O tack. Records fell right and left—61 seconds, 67½ seconds, then an electrifying 71.9 seconds!

Guam's alleged 57 seconds soon became a basis of qualifying on our match team. We now have established a "61 Club" (of course) for tack spinners whose proficiency enables them to spin their tacks fairly consistently for over 61 seconds.

Our team captain is LT Jack E. Everling, USN (the finder of the most perfect tack), who holds the amazing record with 71.9 seconds. Many have tried to equal his mark, but all have fallen short.

So, we snap our blistered fingers at the Guam tack spinners, and rest easily as we watch for potential "Sixty-One" members.—R. T. Hoppe, LCDR, USN, CO, VF-61.

• *I guess we started things spinning. We'll let you know if anyone beats this record. Till then, rest—but don't sit—on your laurels.*—ED.

Choosing Your Next Duty

SIR: In October 1957 I filled out a rotation data card for Seavey. At that time I was serving with Heavy Photographic Squadron 61, home-based at Guam. I understood that I would probably be ordered to shore duty in the United States at the expiration of my tour overseas between 1 Feb 1958 and 1 Feb 1959. Last July I received orders, but to Commander Carrier Air Group 15, not shore duty.

In January this year, I again received orders, and again for sea duty. This time aboard USS *Lexington* (CVA 16).

Right now, I'm confused. I was supposed to go ashore some time during the last year, but instead I have had two intra-Fleet transfers. Can you tell me what's going on, and when I can expect orders to shore duty?—W.E.S., DK1, USN.

• *You were on the Seavey list before your last intra-Fleet transfer, but there were no billets open in the area of your duty preferences. You were therefore reassigned to sea duty to await orders. When you reported aboard* Lexington *a diary entry automatically reinstated you on Seavey.*

It is still impossible, however, to predict when you may come ashore. You will be considered along with other DK1s who want the same area. The regular four months' lead time given under Seavey will give you ample time for personal planning.

This additional sea duty is not the fault of Seavey at all. If you remember, when you filled out the data card you were told not to limit, too closely, your choices of duty locations, and that an entry of "anywhere" would greatly increase your chances of coming ashore. In your case, there have been no openings for you in the area of your choice. Next time you have an opportunity to fill out a data card, think about the area of choice, and don't limit it unless you want to chance waiting a while for orders.—ED.

Oil and Coal Burners

SIR: May I add my two cents' worth to your comments on CAPT Burrill's letter on oil burners in January 1959 issue of ALL HANDS?

According to the foreword of "*Ship's Data, U. S. Naval Vessels, 1924,*" the U. S. Navy had 18 battleships, first line, in commission. Only six of them were coal burners.

The coal burners were *Florida, Utah, Arkansas, Wyoming, New York* and *Texas.*

Incidentally, the keels for two of the oil burners—*Nevada* and *Oklahoma*—were laid as early as 1912. — Fred Abrams, DCWC, USN (Ret.)

• *Glad to hear you agree. It's always good to get a vote of confidence from an old salt.*—ED.

Language Experts

SIR: While stationed in Naples, Italy, I learned to speak the Italian language fluently. I have not, however, ever completed any official courses of study and at present there is nothing in my service record to the effect that I can speak Italian.

Can you give me some information on how I can go about getting a secondary job code number of ESX-9835 (Interpreter, Italian Language). — C. O. W., YN1, USN.

• *No restriction is placed on assignment of NEC codes to enlisted personnel other than the Special Program Code (9900) series and a limited number of Rating Series Codes. Code assignments are based upon qualifications in accordance with the NEC manual as determined by the commanding officer.*

In determining individual qualifications for assignment of an NEC in the 9800-9889, Linguists Group, the following criteria, as listed in the "Guide to Enlisted Classification" (NavPers 15780, Rev. 5/1/53), should be used by the commanding officer:

Linguist—*Ability to read, write and speak a foreign language enough to serve as interpreter and translator as defined below:*

Translator—*Ability to read and write a foreign language well enough to translate that language interchangeably with English in accurately written form.*

Interpreter—*Ability to understand and speak a foreign language well enough to translate that language interchangeably with English in a prompt and accurate oral manner.*—ED.

Concerning Warrant Officers

SIR: I am a temporary W-2.

On 20 Sep 1957 I applied for a permanent appointment in that grade. I received a reply from BuPers, dated 15 Oct 1957, which stated that there was no conversion program at the time and none was planned for the foreseeable future.

Since then I have seen items in various publications announcing selections for permanent appointment in the W-4, W-3 and W-2 pay grades. The names of those selected were not given. Curious, I looked in the 1958 Register of Officers and found at least one permanent W-2 who was junior to me.

I have discussed this subject with other temporary warrants who have also applied and been turned down. From what I've heard of their views, I feel most of us would like to have these questions answered:

Is there, or is there not, a program, plan, or chance for becoming a permanent warrant officer?

Why do some get permanent appointments while others don't?

Are permanent appointments given in recognition of outstanding feats, or are there some special qualifications for them, with which I am not familiar?

Without beating around the bush, please tell us just what the true picture is.—F. E. B., CHBOSN, USN.

• *You already seem to have most of the true picture. What you need now is a bit of background information.*

As you know, there is no program in effect or in the works for conversion from temporary to permanent WO. This policy is actually designed for your own protection.

Since a temporary WO keeps his permanent enlisted rating, he may, if he is twice passed over for promotion, revert to his previous enlisted status and remain on active duty until he has put in enough time to retire. A permanent WO would really be out of luck in such a situation. After he had twice failed to be selected for promotion he would be separated from the service (unless he were in the 18-to-20-year total service bracket, in which case he could remain on active duty until he completed 20 years' service).

Thus, a twice-failed permanent WO could be separated without having enough active duty time to permit his being placed on the retired list, or he could be forced to retire before he had reached the 30 years' service mark.

The law governing dual employment and dual compensation is another factor to be considered. Under the current statutes, a retired commissioned warrant officer cannot accept a position with the federal government if either the retired pay to which he is entitled or the salary of the position is $2500 per year or more. This restriction cannot be avoided by waiving retired pay, although an exception exists for Reserve officers retired under Title 3 of Public Law 810, 80th Congress. However, these statutes do not apply to the individual who retires in a permanent enlisted grade.

Here again, the commissioned warrant officer with a temporary appointment has an advantage, since he can avoid the restriction by retiring in his permanent enlisted grade.

Now, you say you want to know why some WOs get permanent appointments while others don't. Here's your answer:

Since 1950, permanent appointments have not been issued, except in a few isolated cases.

Some permanent LDOs who were required to vacate their LDO status were given, by statutory requirement, permanent warrant grades. This is what happened in the case of the permanent WO who is junior to you. As an LDO who was twice passed over, he was appointed a permanent warrant officer in accordance with statutory law.

Another exception was an isolated case back in 1956. At that time, about 26 WOs were selected for appointment to ensign (135x) for temporary service and given permanent warrant status.

As for your third question, the answer is "no." Permanent appointments are not given in recognition of outstanding feats. There are no special qualifications.—ED.

Fireman, Save My Child!

SIR: The little gem that appears below, published by NAS Los Alamitos, recently crossed my desk. It makes a point which I think needs emphasis. There's quite a connection between the fireman and the Navyman.

Between the times we are putting out a fire in the Middle East or exploring new routes under the Polar ice cap, the Navy is very busy with its day-to-day work. The strength of our public relations program is derived from the cumulative efforts of the many individual programs developed throughout the Navy.

The point is—the glamorous things pretty well take care of themselves—it is the day-by-day reporting of seemingly routine jobs that marks the degree of success of the Navy's information efforts.

I'm addressing these remarks to you because I'm basically a PIO man myself.—C. C. Kirkpatrick, RADM, USN; Chief of Information.

• *Aye, aye, sir. We've been trying to do just that for years. NAS Los Alamitos, and its artist and Pub Info Department rate a pat on the back for a very fine presentation of what is a continuing job.*—ED.

A FIREMAN SAVING A BEAUTIFUL GIRL FROM A BURNING BUILDING IS NOT IN NEED OF A PUBLIC RELATIONS OFFICE.

HE COULD USE A LITTLE FAVORABLE PUBLICITY, THOUGH, WHEN HE'S SITTING AROUND THE ENGINE HOUSE PLAYING CHECKERS.

"WE COULD ALWAYS GO OUT AND START SOMETHING!!"

Ship Reunions

News of reunions of ships and organizations will be carried in this column from time to time. In planning a reunion, best results will be obtained by notifying the Editor, ALL HANDS Magazine, Room 1809, Bureau of Naval Personnel, Navy Department, Washington 25, D. C., four months in advance.

• USS *Helena* (CL 50)— A reunion will be held on 1, 2 and 3 August at the Edgewater Beach Hotel, Chicago, Ill. For further information, write to Joseph J. Cannone, 2450 South 19th St., Omaha 8, Nebr.

• USS *Hornet* (CV 8 and CV 12) —The eleventh annual reunion will be held at the Hotel Fort Shelby, Detroit, Mich., on 26, 27 and 28 June. Write to Henry Turner, 2045 Packard Rd., Ann Arbor, Mich.

• USS *Idaho* (BB 42)—The second annual reunion will be held at the Nansemond Hotel, Ocean View, Norfolk, Va., on 19, 20 and 21 June. For additional information, write to USS *Idaho Association,* P.O. Box 8048, Norfolk 3, Va.

• USS *Lexington* (CV 2) — The sixth annual reunion will be held on 27 June at the Mission Valley Country Club, San Diego, Calif. For more details, write to W. H. Blake, 2168 McKnight Dr., Lemon Grove, Calif.

• USS *New Mexico* (BB 40)—The second annual reunion is scheduled for 30 May at the Jack Kennedy Center (CPO Club), Terminal Island, Long Beach, Calif. Write to D. J. Cady, 632 Roycroft St., Long Beach, Calif.

• USS *Washington* (BB 56)—The fourth reunion will be held on 3, 4 and 5 July at the Pick-Congress Hotel, Chicago, Ill. Write to Harry Midkiff, 483 - 12th Street, Brooklyn, N. Y.

• *Fleet Cadets*—The 21st annual reunion of Fleet Cadets, NavCad classes 81C through 109C, will be held at Martines, Pensacola, Fla., on 23 and 24 May. Write to CDR H. H. Hirschy, USN, c/o O&R Department, NAS Pensacola, Fla.

• *LCI(L) Flotilla Two* — A reunion is scheduled for 5, 6 and 7 August at the Hotel Warwick, Philadelphia, Pa. For more details, write to Paul Carter, 804 - 4th Avenue, Iowa City, Iowa.

• *Seabee Veterans of America* — The annual reunion will be held on 13, 14, 15 and 16 August at the Commodore Perry Hotel, Toledo, Ohio. For additional information, write to Donald E. Laubenz, 298 Mettler Street, Toledo 8, Ohio.

• *19th Seabees*—The annual reunion will be held at the Concord Hotel, Kiamesha Lake, N. Y., next September. Write to Herbert McCallen, 655 East 14th Street, New York 9, N. Y.

• *16th Seabees*—The seventh reunion will be held at the Hotel Lafayette, Long Beach, Calif., on 9, 10, 11 and 12 July. For more details, write to Jerry Bliss, 2604-A Missouri Ave., South Gate, Calif.

• *73rd Seabees*—The 10th annual reunion will be held at the Daytona Plaza Hotel, Daytona Beach, Fla., on 24, 25 and 26 July. Write to Joseph E. Powers, P.O. Box 1462, Daytona Beach, Fla.

• *302nd Seabees*—The 12th annual reunion is scheduled for 19, 20 and 21 June at the Pick-Roosevelt Hotel, Pittsburgh, Pa. For more details, write to Harry W. Price, Jr., 135 Third Street, Lewistown, Pa.

• *Torpedo Squadron 86* — A reunion will be held in St. Louis, Mo., on 21, 22 and 23 August. Write to Joe Filler, P.O. Box 31, Sikeston, Mo.

• *Waves* — Waves will celebrate their 17th birthday with a reunion to be held at the Hotel Robert Meyer, Jacksonville, Fla., on 24, 25 and 26 July. For more details, write to LCDR Eunice A. Horne, USNR, Box 665, Jacksonville 1, Fla.

• USS *Knapp* (DD 653)—The second reunion of *"Knappites"* and their wives will be held on 4 July in New York City at the Park-Sheraton Hotel. For information, contact Fred Hauck, 1018 Bowling Green Drive, Westbury, L. I., New York.

• USS *Lenawee* (APA 195)—All shipmates who are interested in holding a reunion may write to James E. Oakley, 101 N. Third Street, Greenville, Ill.

USS *Nantahala* (AO 60)—All who served on board from 1952 through 1956 who are interested in holding a reunion in the Midwest may write to Terry Landsberg, 436 S. Euclid, Oak Park, Ill.

• USNR *Midshipmen's School, Columbia University, N. Y.*—Instructors who are interested in holding a reunion with time and place to be decided may write to William A. McCune, 749 Lawson Avenue, Penfield-Havertown, Pa.

Advancement in Changed Rating

SIR: Can a person in the regular Navy change his rating, say from GM2 to DK2, and at the same time compete in the service-wide examination for advancement to DK1? The man concerned is eligible for advancement and authority has been received from BuPers for the change from GM2 to DK2.

The command holds no instructions that cover such a case. BuPers Inst. 1440.5B says that personnel cannot compete for advancement in the rating currently held, but says nothing about the new rating.—J. T. M., PN3, USN.

• *Normally, a person who changes his rating cannot simultaneously compete for advancement. Exceptions have been granted, however, for persons who have graduated from a service school in the requested rating.*

Persons in school for the new rate may compete for advancement simultaneously with a change in rating. Authority is granted in BuPers Inst. 1430.7C.

In the past, the Chief of Naval Personnel has allowed the simultaneous change and advancement between certain technical ratings, but in specific cases only, not as a general policy.—ED.

Travelingest Birdfarm

SIR: In "Taffrail Talk" (February 1959), mention is made of USS *Essex* (CVA 9) "approaching the peacetime record" by steaming 53,000 miles in seven and one-half months. You also credit USS *Roanoke* (CL 145) with 46,058.12 miles in six months.

While prodigious indeed, these brief excursions, I submit, are by no means record-breaking. A check of the log of USS *Wasp* (CVS 18), the Navy's travelingest birdfarm, should indicate that she steamed nearly 100,000 miles in a 10-month period (1956-57).

Speaking of *Essex*, wasn't she redesignated a CVS, along with USS *Wasp* (CVS 18), on about 1 Nov 1957? You list her as a CVA.—M. B. C., LTJG, USNR.

• *If you'll re-check "Taffrail Talk," you'll note we didn't say* Essex *was "approaching the peacetime record." We asked "Does the Essex mark . . . approach the peacetime record?" We didn't know. Since that time we have received many claims to the peacetime record. We publish the figures—You decide if you're the champ.*

By the way, we were right the first time. Essex *is a CVA.*—ED.

Around the World in Worcester

SIR: In the February issue of ALL HANDS you published some interesting statistics about USS *Roanoke* (CL 145). You also asked if similar statistics about USS *Essex* (CVA 9) set any records.

I don't know if the following figures will set any records, but I do know that if it can be done, USS *Worcester* (CL 144) will do it. Here are some facts and figures built up by that ship during a round-the-world cruise:

Sailed 47,617 nautical miles in 203 days.

Visited 20 foreign ports, 12 foreign countries, 8 islands, and 4 continents.

Crossed the Atlantic, Indian, and Pacific Oceans.

Passed the East and West Indies, Hampton Roads and Cape Hatteras.

Passed through the Suez and Panama Canals.

Sailed 17 seas, 15 bays.

Steamed through 9 straits.

Spent 3462 hours underway and 1754 hours in port.

Fueled 43 times while underway.

Rigged highline 28 times for the transfer of personnel.

Went to general quarters 76 times.

Replenished supplies 6 times.

Besides the above marks set by the ship, various departments aboard also have a few statistics to add.

• The gunnery department expended: 1977 rounds of 6-inch ammunition; 900 rounds of 3-inch ammunition; 8179 rounds of 20mm ammunition.

• The engineering department: used 5,300,826 gallons of fuel oil; generated 3,742,133 kilowatt hours of electricity; showed 500 movies.

• The supply department supplied: 6,890,668 gallons of fresh water; 300,000 pounds of fresh meat; 38,000 pounds of coffee or 1,900,000 cups; 54,000 pounds of butter; 105,000 pounds of flour; 160,000 pounds of sugar; 232,800 eggs; sold 30,151 cartons of cigarettes.

• The medical department: took care of 84 surgical cases; administered 12,511 medical treatments; placed 208 patients on sick list.

• The dental department: received 1720 patients; extracted 348 teeth (53 required surgery); filled 650 teeth.—Alfred F. Thomas, Jr., BM3, USN.

• *We don't know if these are records either, but it should keep a few sailors busy finding out if their ships can top them.*—ED.

CPO Seniority List

SIR: An article I picked up somewhere along the line described a BMCM as the senior enlisted man in the Navy. This was based on his being a master chief boatswain's mate with date of rate as CPO some time in 1944.

Does BuPers plan to publish a name list of the senior man in each rate, or a seniority list of all E-8s and E-9s?

On 16 Nov 1958, I was appointed a master chief yeoman. I have served on continuous active duty as a YNC since 16 Oct 1942.—R.H., YNCM, USN.

• *There will not be a seniority list of master chief petty officers published. However, the precedence list and regulations governing precedence (Art C-2102, "BuPers Manual") is being rewritten and will be published this summer in the new "BuPers Manual."*

As for where you will stand in regard to the other ratings, you'll just have to wait until the new precedence list comes out.—ED.

Ship with Spirit

SIR: It was with a feeling of pride that I read the story of USS *Rankin* (AKA 103), "Is There A Formula For a Smart Ship?" in the January 1959 issue of ALL HANDS.

I was a member of her recommissioning crew under CAPT B. H. Meyer, USN, and served in her until June of 1954. I think the following items might be of interest to you.

After reporting to the Atlantic Fleet in September 1952, *Rankin* won her first Battle Efficiency "E" in just ten months of the competitive year. Isn't this some sort of record?

In addition, she was the first amphibious type ship to receive an "Outstanding" in communications while undergoing training under the Narragansett Bay Training Group at Gonaives, Haiti.

The officers of *Rankin* during this period still keep in touch with one another through private correspondence and semi-annual newsletters from LT W. H. McDaniels, USN.—LT A. J. Ashurst, USN.

• *As CAPT John Harllee,* USN, Rankin's *present skipper, said, " . . . she has always been a smart ship; a tight ship. A ship and her men don't spring out of the nowhere, into the here. What happens to her today is determined to a large extent, by what happened to her yesterday."*

Your letter helps to show what he meant by that, and here's another point. Mr. J. W. Hardey, Jr., now in the BuPers Training Division, once headed the CIC Department of the Narragansett Bay Training Group, which you mention in your letter. Speaking of Rankin, *he said, "Yes, I remember her! She was the best ship I ever rode in the whole time I was with the training group—not just in CIC, but in practically everything. Her skipper when I knew her was another good man—CAPT (now RADM) Lawson P. Ramage."*—ED.

SIR: Your special report on USS *Rankin* in the January 1959 issue is the most enlightening article I have ever seen in ALL HANDS. Congratulations.—LT E. D. Dougherty, USN.

• *Thank you. Perhaps some of* RANKIN's *spirit rubbed off on us.*—ED.

★ ★ ★ ★ TODAY'S NAVY ★ ★ ★ ★

BOTTOMS OUT—*USS Kearsarge* (CVA 33) stands high and dry on keel blocks in U. S. Naval Shipyard, Long Beach, Calif., as she gets her hull cleaned.

Award for Top Aerial ASW Unit

Navy aerial antisubmarine warfare units will soon compete for a new award—the Captain Arnold Isbell Trophy. It will belong to Fleet squadrons that receive the Battle Efficiency "E" award for excellence in operating land-based aircraft, seaplanes, carrier aircraft and Navy blimps on air antisubmarine warfare maneuvers.

Commencing in fiscal year 1959, the trophy will be awarded annually in each Fleet to the VP-ZP (land), VP (sea) and VS (carrier) squadrons that win the "E."

The name of the winning squadrons will be engraved annually on the trophy, which will remain permanently in the Navy Department in Washington, D. C. Winners will receive engraved plaques at the same time they are presented the Battle Efficiency "E" award.

The trophy is named in honor of Captain Arnold Jay Isbell, USN, who was awarded the Distinguished Service Medal for "exceptionally meritorious and distinguished service to the government . . . as Commanding Officer of the USS *Card* (escort carrier) and as Antisubmarine Task Group Commander from 27 Jul to 9 Nov 1943." (See ALL HANDS, April 1958, pp. 59-63.)

He was killed in action aboard USS *Franklin* (CV 13) on 19 Mar 1945, six days after being designated commanding officer of USS *Yorktown* (CV 10).

Captain Isbell's task unit received the Presidential Unit Citation for pressing the air antisubmarine attack against hostile submarines along the convoy route to North Africa.

YESTERDAY'S NAVY

On 1 May 1898 the Asiatic Squadron, under Commodore Dewey, defeated the Spanish fleet in the Battle of Manila Bay. On 4 May 1865 COMO E. Farrand, commander of the Confederate naval forces in Mobile Bay, Ala., surrendered to the Union Navy. From 4 to 8 May 1942 the Battle of the Coral Sea, a strategic victory for the United States, was fought. (All damage in the battle—the first in modern naval history in which opposing warships did not exchange a shot—was inflicted by carrier planes.) On 5 May 1861 the Naval Academy was transferred from Annapolis, Maryland, to Newport.

It's Super-Cavitating

A 24-foot boat, with a "supercavitating" propeller and hydrofoils, is joining the Navy to serve as a design test vehicle. Scheduled for launching in April, the boat is designed for a speed of 60 knots.

The new craft is the product of a $55,000-contract with the Office of Naval Research. It will weigh one ton. Larger craft of similar design may have a wide variety of military uses, ranging from logistics transport to antisubmarine warfare.

The boat is powered by a T-58 turboshaft engine—the type used in helicopters and vertical take-off and landing experimental aircraft. A high-speed precision transmission system is also being developed for use in the boat.

Normal hydrofoils are, in effect, underwater wings that lift a boat's hull out of the water to reduce drag and increase speed. They have water flowing both above and below their surfaces. The new boat will have not only a super-cavitating propeller, but also super-cavitating foils, which create a vapor cavity on the upper surfaces of the foils to get greatly increased speed.

The super-cavitating propeller, a major breakthrough in propeller design, was announced by ONR in August.

Strong to the Rescue

The destroyer USS *Strong* (DD 758) rescued 13 crew members from two fishing craft that floundered during a storm in the Persian Gulf.

Operating as a unit of the Middle East Force, *Strong* was on a routine patrol when a "shamal" (a strong northwest wind which blows under clear skies accompanied by intense dry heat) hit the area. Within a few minutes, the wind rose from a light breeze to hurricane force.

Strong sighted two 40-foot Arab fishing boats in distress and took them in tow. Heavy seas parted the destroyer's six-inch manila towing lines and huge waves flooded the boats. As they were sinking, *Strong* rescued their crews.

After the storm a British survey ship, HMS *Owen*, and planes of the British Royal Air Force joined *Strong*

in an extensive two-day search of the area for the survivors of other craft which might have gone down during the 12-hour storm.

All-Atomic Navy Ahead

"Nuclear power may conceivably run all of the combatant ships of the United States Navy some day," say Navy Department propulsion experts.

Admiral Arleigh Burke, CNO, said recently, "We have made considerable progress in nuclear propulsion. Actual performance indicates that nuclear submarines are safe and reliable, and have a very great cruising range, even at high speed."

Admiral Burke, in a recent statement to the Senate Armed Services Committee, declared, "Nuclear power is being installed in an aircraft carrier (*Enterprise*), a cruiser (*Long Beach*, CG(N)9), and a guided missile frigate—now building. The Navy has requested that the Atomic Energy Commission develop a nuclear-power plant for a destroyer."

To date, six nuclear-powered submarines have been commissioned. They are uss *Nautilus*, SS(N) 571; *Seawolf*, SS(N) 575; *Skate*, SS(N) 578; *Swordfish*, SS(N) 576; *Sargo*, SS(N) 583; and *Skipjack*, SS(N) 585.

Already launched and slated to be commissioned in 1959 are another three nuclear submarines: *Seadragon*, SS(N) 584; *Triton*, SSR(N) 586; and *Halibut*, SSG(N) 587.

On the building ways and slated to be launched this year are *Scorpion*, SS(N) 589; *Sculpin*, SS(N) 590; *George Washington*, SSB(N) 598; *Patrick Henry*, SSB(N) 599; *Theodore Roosevelt*, SSB(N) 600; and *Robert E. Lee*, SSB(N) 601.

CRUISERMEN-FIREMEN—Crew of *USS Macon* (CA 132) fights inferno on burning Italian merchant tanker. *Macon* rushed to stricken ship, saved crew.

Scheduled to be launched during 1960 are *Scamp*, SS(N) 588; *Shark*, SS(N) 591; *Snook*, SS(N) 592; *Thresher*, SS(N) 593; *Permit*, SSG (N) 594; *Tullibee*, SS(N) 597; and *Abraham Lincoln*, SSB(N) 602.

Other nuclear-powered submarines being built are *Pollack*, SS(N) 595; *Plunger*, SS(N) 596; SS(N)s 603, 604, 605, 606, and 607, and SSB(N) 608. For more on the nuclear Navy, see below.

That Makes 30 Atomic Subs

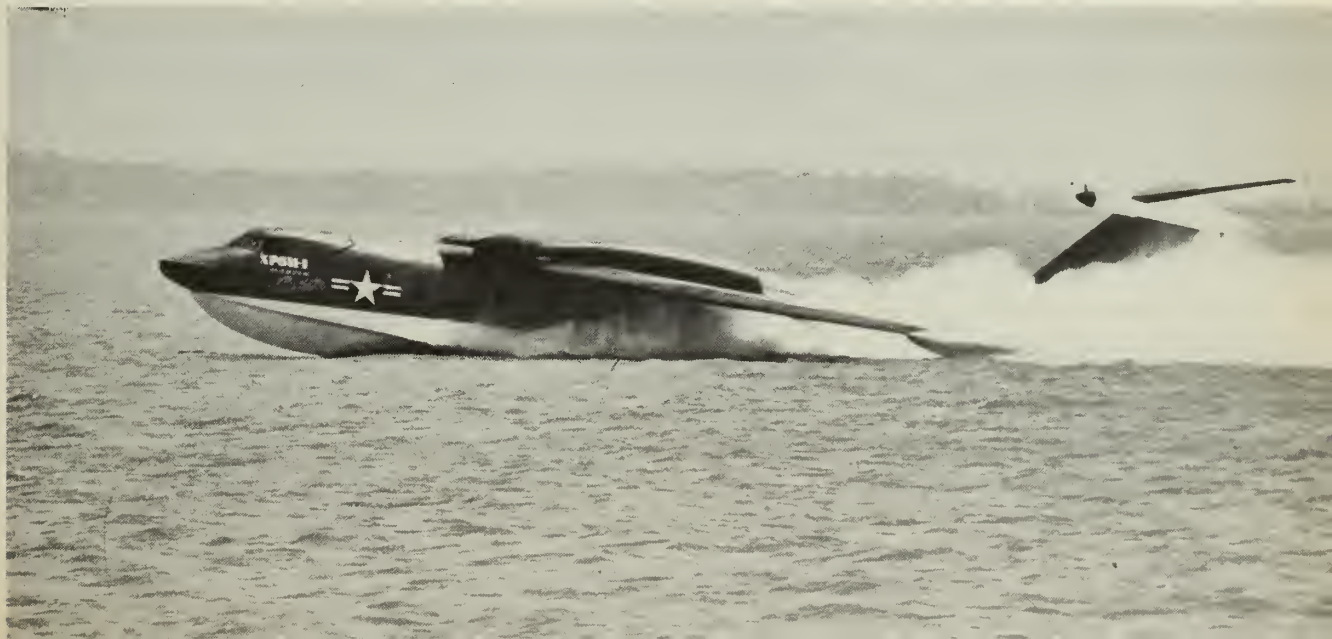
Contracts have been awarded two civilian shipbuilders for the construction of four nuclear-powered attack submarines. At the same time, two other SS(N) types have been assigned to the Mare Island and Portsmouth Naval Shipyards for construction.

Three of the six submarines, two from the fiscal 1958 shipbuilding program and one from the fiscal 1959 program, were formerly designated nuclear-powered guided missile submarines, SSG(N). These were redesignated as nuclear-powered attack submarines, SS(N), after the *Regulus* II missile program was cancelled. The remaining three are SS(N) types from the fiscal 1959 program.

All six underseas ships will be the same class as *Thresher*, SS(N) 593, which is now being constructed at the Portsmouth Naval Shipyard.

Including these, the Navy has 30 nuclear-powered submarines either under construction or in operation.

KING SIZE SEAPLANE — Navy P6M Seamaster jet churns up the surfaces during take off for a test flight.



LIGHT CONVERSATION—Visual message passed during GQ drill as *USS Des Moines* (CA 134) cruises in Med.

Getting the Big Picture

The Navy has successfully fired and recovered a rocket from which photographs were taken of weather conditions over an area of more than 500,000 square miles.

The two-stage *Hugo* rocket was fired from Wallops Island, Va., to a height of over 86 miles. Two 16-mm cameras in the nose cone photographed a strip 1000 miles in length. This compares roughly with the expanse between the southern tip of Maine to mid-Florida.

Hugo, which is a combination of a version of the Navy's *Terrier*, surface-to-air missile, and Army's *Nike-Ajax* antiaircraft missile, was fired from a shipboard-type *Terrier* missile launcher. *Hugo* rose to a height of 86.25 miles, and then landed 10 minutes later in the ocean 56 miles away.

The radar picket destroyer USS *Leary* (DDR 879), which had followed the missile with her tracking equipment, easily located the 35-pound nose cone. Inside the cone was a small radio transmitter. It was taken from the ocean despite 10-foot swells, and winds that ranged from 25 to 40 knots.

Up until this time, weather forecasting has been done with the aid of weather balloons, which rise to about 20 miles, and camera-equipped planes which operate at even lower altitudes. From these comparatively low altitudes, only part of a storm front can be photographed at one time. With the aid of *Hugo*, however, the entire storm can be photographed.

Naval research scientists hope to fire eight to 10 more *Hugo* rockets during this calendar year.

Sparrow Joins Jet Squadrons

Jet interceptor squadrons operating aboard USS *Midway* (CVA 41) and *Bon Homme Richard* (CVA 31) are now armed with *Sparrow III*—the Navy's newest air-to-air guided missile.

The new electronically-controlled weapon greatly strengthens the Fleet's defenses against aerial attack. Although it doesn't look much different from earlier *Sparrows* it has a number of combat advantages over its predecessors.

In flight, the slender supersonic weapon acts for itself to track down and destroy its quarry. It delivers its warhead with at least 50 per cent more explosive force than that of previous comparable U. S. air-to-air guided missiles.

With *Sparrow III*, a pilot can get his shots off faster without sacrificing accuracy and, since the new "bird" has a longer range than earlier ones, it can be launched at a greater distance from the enemy. Its range will also enable a pilot to hit aircraft flying at greater altitudes than he can reach in his own plane.

The missile can be fired at targets which the pilot cannot even see. A light on the radarscope tells him when the target is within range. Then, all the pilot has to do to launch is press the release button.

Sparrow III can also be set to fire automatically when it is within range of its victim.

The new weapon can be fired in many combat situations where the use of other air-to-air missiles would not be practical. It can destroy targets in head-on attacks at very high closing speeds. And, it increases the pilot's maneuvering freedom, to give him a major advantage in air battles.

With earlier weapons, the pilot had to hold his plane in an exact firing position for a definite period of time before launching. With *Sparrow III*, which can be fired from any approach angle within a relatively wide margin of aiming error and still hit its mark, this is unnecessary.

The missile is about 12 feet long, has a body diameter of eight inches

Flattop Squadron Leads a Busy Life

The aircraft carrier USS *Shangri La* (CVA 38) is back operating out of San Diego after nine months of patrolling the Western Pacific with the Seventh Fleet. Aboard are the aircraft and men of Attack Squadron 115.

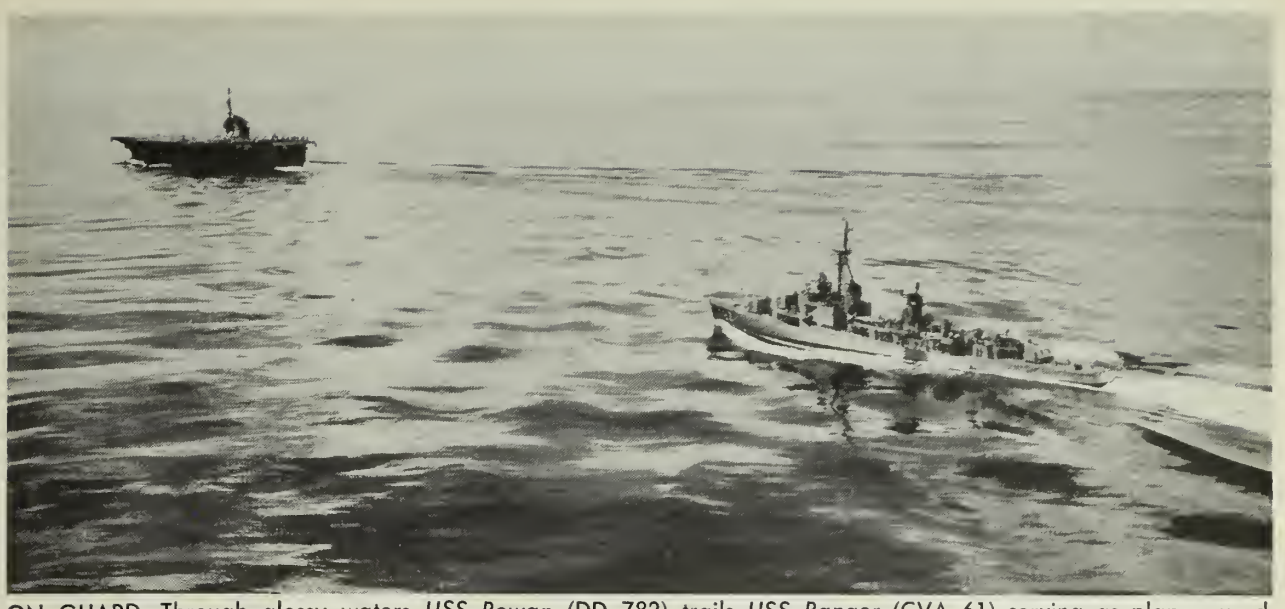
The squadron, composed of a little over 100 men and 20 pilots, is known throughout the Fleet as the "Chargers." They fly AD-6 type aircraft, earlier models of which gained fame for interdiction and troop support in Korea.

This single-engine prop aircraft flies in the jet age simply because it surpasses the corresponding light jet attack aircraft in two respects. It has the ability to carry about six times more ordnance per aircraft with conventional bombs or rockets, and has the capability of long-range attack with nuclear weapons at tree-top level. With a typical close-air support load, one AD-6 carries 156 folding fin aircraft rockets, a 2000-pound bomb, and two napalm tanks.

During the nine-month tour, the squadron flew extensive combat training. On practice targets in individual drops for score, the pilots released a total of 1952 bombs, fired 1157 rockets and 32,217 rounds from 20mm cannon. In one particular 18-hour period of sustained "attack" operations, the 12-man ordnance crew loaded 82,000 pounds of bombs.

But it wasn't all flying with the squadron during the cruise. In addition to maintaining aircraft, over 400 correspondence courses were successfully completed in a self-advancement program involving 90 per cent of the crew.

What were the results of this training program? Thomas S. Goth, AD1, was commissioned ensign; Joseph B. Conner, ADC, was selected to warrant, and Norman Winningham, AT2, went to naval aviation training. Of the 47 other men who successfully passed promotion examinations, 37 were advanced in rate.



ON GUARD—Through glossy waters *USS Rowan* (DD 782) trails *USS Ranger* (CVA 61) serving as plane guard.

and weighs about 350 pounds. Several *Sparrow IIIs* can be carried by a single plane. They can be fired either singly or in a rapid series. A solid propellant rocket motor drives them.

The new missiles are the primary armament on the all-weather F3H-2 *Demon*. They will also be the primary weapon of the F4H-1.

'Hot, Straight and Normal'

The first *Talos* supersonic surface-to-air missile to be shot at sea was successfully fired from the guided missile cruiser USS *Galveston* (CLG 3) early this year.

The *Talos* booster sent its payload aloft trailing a bright orange flame and its ramjet engines took over on schedule. The shot was "hot, straight and normal," *Galveston* reported.

Talos has a 40,000-horsepower ramjet engine and weighs about 3000 pounds. It is designed to destroy enemy aircraft more than 65 miles away at high altitudes. Its warhead is detonated by a proximity fuse.

Taps for 43 Mothball Ships

Forty-three outdated U.S. warships are being scrapped by the Navy—five battleships, nine heavy cruisers, 10 light cruisers, four antiaircraft light cruisers, and 15 World War II "jeep" carriers.

While in mothballs, these ships have cost the Navy $2,800,000 in yearly maintenance, plus the services of 325 officers and men. By scrapping the ships, the Navy hopes to salvage about $3,082,000 worth of equipment, and to sell the scrap metal for another $27,194,000. The original cost of the ships was about $697,640,000.

Before deciding to scrap these ships, the Navy studied the possibility of modernizing them for present-day use. In most cases the modernization would have cost more than the ship did originally. Besides that, hull configurations and the complexity of modern machinery would have tended to hold down the speed that is so vitally needed in our modern Fleet.

These ships, some of which were built back in the early 1920s, have been lying dormant in the reserve fleets at Philadelphia, Pa., Bremerton, Wash., San Diego, Calif., Stockton, Calif., and Boston, Mass., for at least 11 years.

The ships being scrapped are as follows:

Battleships—*Tennessee* (BB 43), *California* (BB 44), *Colorado* (BB 45), *Maryland* (BB 46), and *West Virginia* (BB 48).

Heavy Cruisers—*Chester* (CA 27), *Louisville* (CA 28), *Augusta* (CA 31), *New Orleans* (CA 32), *Portland* (CA 33), *Minneapolis* (CA 36), *Tuscaloosa* (CA 37), *San Francisco* (CA 38), and *Wichita* (CA 45).

Light Cruisers—*Birmingham* (CL 62), *Savannah* (CL 42), *Honolulu* (CL 48), *Cleveland* (CL 55), *Columbia* (CL 56), *Montpelier* (CL 57), *Denver* (CL 58), *Santa Fe* (CL 60), *Houston* (CL 81), and *Mobile* (CL 63).

Antiaircraft Light Cruisers—*San Diego* (CLAA 53), *San Juan* (CLAA 54), *Oakland* (CLAA 95), and *Reno* (CLAA 96).

"Jeep" Carriers—*Bogue* (CVHE 12), *Nassau* (CVHE 16), *Altamaha* (CVHE 18), *Barnes* (CVHE 20), *Suwannee* (CVHE 27), *Chenango* (CVHE 28), *Santee* (CVHE 29), *Prince William* (CVHE 31), *Anzio* (CVHE 57), *Kasaan Bay* (CVHE 69), *Fanshaw Bay* (CVHE 70), *Saginaw Bay* (CVHE 82), *Shipley Bay* (CVHE 85), and *Steamer Bay* (CVHE 87).

Introducing *Edson*

USS *Edson* (DD 946) has joined her first operational organization, Destroyer Flotilla Three. She has been assigned as flagship for Destroyer Squadron 23, home-ported at Long Beach, Calif.

Commissioned in November 1958, *Edson* is one of the first general purpose destroyers constructed in the U.S. since World War II.

Edson sailed from the Naval Shipyard, Boston, Mass., where she spent 45 days being fitted out. En route to the West Coast, *Edson* visited Ciudad Trujillo, Dominican Republic; San Juan, Puerto Rico; Guantanamo Bay, Cuba; Cristobal, Canal Zone; and Callao, Peru.

Named for Major General Merritt A. Edson, USMC, the "945-class" DD is 418 feet long, displaces 2650 tons and has a top speed of more than 30 knots. She is armed with three automatic rapid-fire dual-purpose 5-inch guns, several automatic 3-inch antiaircraft guns, and antisurface and antisubmarine torpedoes.

About 330 men make up her crew.

BIG BAG—Largest Navy blimp recently reported for Airborne Early Warning duties. Inside 'bag' is largest revolving radar antenna ever carried in aircraft.

Another Use for Moonbeams

Moonbeams are now being used to navigate the experimental ship USS *Compass Island* (AE 153) with more than 10 times the accuracy of present marine compasses.

This is possible through the use of a new radio sextant which uses weak radio waves from the moon to establish a navigational fix. The radio sextant, functioning as a precise compass, is considered a major breakthrough in navigational systems.

This navigational device can be used continuously regardless of weather conditions. The conventional sextant used to measure the angular distance to the sun and stars is useless when the skies are overcast.

The new radio sextant relies on a five-foot cone-shaped antenna to pick up the moon's signals. The sextant receiver used in the system is said to be the most sensitive receiver of its type ever constructed. The receiver recognizes the slightest changes in the signals from the moon and tracks the moon's path across the sky.

Ships equipped with the new radio sextant must take special precautions to insure that constant variables—such as temperature and stability—are maintained. A special pitch-and-roll platform must also be used to stabilize the new navigational instrument in heavy seas.

Aloha *Haleakala*

The new ammunition ship USS *Haleakala* (AE 25)—the first Navy ship to carry that name—was launched at Baltimore, Md., in February. She is 512 feet long, has a light displacement of 7500 tons and a cargo capacity of approximately 7500 tons.

Haleakala will have a hull configuration identical to her prototype, USS *Suribachi* (AE 21). She will be equipped wth improved transfer-at-sea gear with increased load-carrying capacity and shipboard equipment that will speed up the transfer of ammunition cargo.

A dual highline transfer cable will enable her to handle loads up to approximately 12,000 pounds. Two elevator platforms that may be operated separately or simultaneously will provide her with more flexibility in the selection of cargo.

The new ship derives her name from 'Haleakala' volcano on the Hawaiian island of Maui.

Perry Gets Face-Lifting

The Atlantic Fleet destroyer USS *Perry* (DD 844) will undergo modernization-conversion at the Boston Naval Shipyard.

The ship, a World War II type *Gearing*-class destroyer, is slated for extensive changes. She will lose some of her conventional armament and acquire new weapons and electronics equipment designed to increase her effectiveness as an antisubmarine warfare ship.

Her modernization is part of the continuing program to rehabilitate and refit certain World War II ships—chiefly destroyer types—to prolong their useful lives and increase their combat effectiveness.

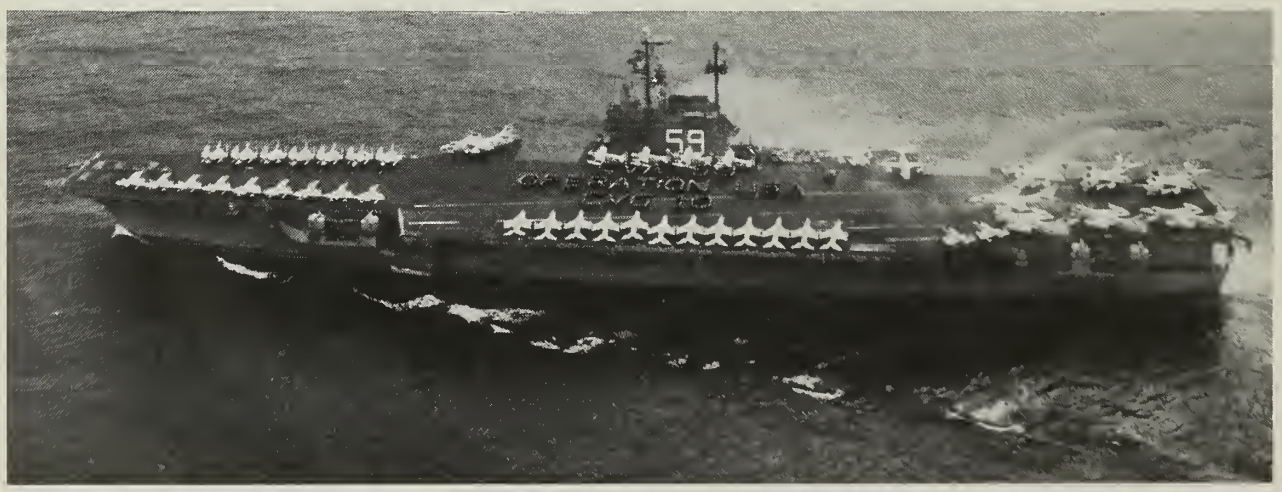
All-of-a-Kind Squadrons

In a move to improve Fleet operational readiness on the East Coast, the Atlantic Fleet Destroyer Force has been administratively reorganized.

Essentially, the change brings similar class ships under the same squadron commander. Under the old organization several ship classes were assigned to one squadron.

A general breakdown of the 16 Atlantic Fleet destroyer squadrons under the new plan is as follows:

- Radar picket destroyers (DDR) and guided missile frigates (DLG), as they enter the Fleet, will make up three squadrons. (Some of the guided missile frigates may also be assigned to DD squadrons as they enter the Fleet.)
- Escort destroyers (DDE) will make up three squadrons.
- Destroyers (DD) and new guided missile destroyers (DDG)



OPERATION USA spelled out by crew of *USS Forrestal* (CVA 59) and Air Group Ten (CVG 10) headed for Norfolk.

will make up the remaining 10 squadrons.

The reorganization took into consideration a previously announced East Coast dispersal plan that was introduced to reduce in-port concentrations of Atlantic Fleet ships.

Electronic Accountant

The accounting function for the world-wide chain of Navy Exchange Stores is now being done by an electronic processing system. Reports from more than 175 Exchanges are being processed by the electronic brain daily. Previously all sales, inventories and expenses were checked monthly.

The new computer has a "memory" capacity of 15,000 words. It can turn out 600 lines of typewritten info a minute.

The new electronic processing system is located at the Navy's Ship Store Office at Brooklyn, N. Y., which is the nerve center for all Navy Exchanges. This new processing system is expected to reduce operating expenses by more than $50,000 a year.

Advanced *Crusaders*

The Navy has taken delivery of the service's first production model of a new high-performance F8U-2 *Crusader* fighter plane.

An advanced version of the 1000-mile-an-hour-plus F8U-1, the F8U-2 flies at nearly twice the speed of sound, has a more powerful engine than its predecessor, and has a more advanced fire control and radar control system.

LT J. J. Chambers, USN, of the Naval Air Test Center, Patuxent River, Md., flew the new *Crusader* to the East Coast, where exhaustive flight testing is scheduled.

Even though this is the first production model, an improved version of this plane is already scheduled to be delivered to the Navy in 1960. Named the F8U-2N *Crusader* it is described as a carrier-based, limited weather fighter which also flies at nearly twice the speed of sound.

Basically, the F8U-2N is a development of the F8U-2, but has increased capabilities to detect and destroy targets in darkness and bad weather. To perform this mission, it has a number of significant improvements.

It has a newly-developed autopilot, and has push-button controls which perform many of the pilot's routine tasks such as holding an altitude, holding a heading, selecting a new heading or circling over a given point. These will allow the pilot to give more thought to his assigned mission.

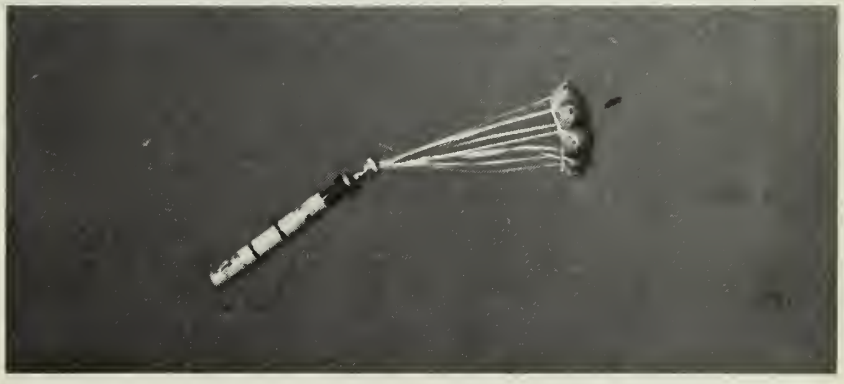
In keeping with its mission, the F8U-2N will also have improved radar, revised interior and exterior lighting systems and improved instruments.

Although the new aircraft will resemble the F8U-2 in appearance, it will have several interior and material changes. It will be able to use the Navy's *Sidewinder* missile, plus newer types now being developed.

This limited weather fighter stems from the F8U-1 *Crusader*, the world's fastest operational Navy fighter.

Both the F8U-2N limited weather fighter and the F8U-2 fighter differ in appearance from the F8U-1 in that they have ventral fins mounted under the tail section to give increased stability for the higher speed ranges in which they fly.

PARACHUTE TORPEDO—Mark 44 torpedo is a new lightweight ASW weapon that seeks out target. It can be dropped by plane or fired from shipboard.



Hams at Treasure Island

Operators of the amateur radio station of the Naval Schools Command at Treasure Island, Calif., spend their nights and weekends batting the breeze with other hams in Peru, Chile, Ecuador, England, Japan and the United States. These operators, using the call letters K6NCG, are the students and staff members of the Electronics Schools.

Since some of the students are citizens of other countries, a few of them use this means to keep in contact with their families.

Improvements in the station during the last few months have included addition of acoustic tile baffles to eliminate background noise, the installation of a 37-foot crank-up tower and the purchase of a complete 1 kilowatt side band transmitter and receiver.

Chief Warrant Officer C. M. Unfried, one of the officers in the Electronics School, is trustee for K6NCG. The custodian is Chief G. G. Carlson. Both are licensed amateur radio operators.—Judith Howell, JOSA, USN

Conversion and Name Change

A conversion job will change *Prairie Mariner*, now being operated by the Maritime Administration, into an attack transport. When the conversion is complete, about the end of 1960, the ship will be renamed USS *Francis Marion* (APA 249).

Changes to the ship include facilities for combat troops and their vehicles. The hoisting capacity will be increased to enable her to handle large landing craft. Other changes include installation of a helicopter platform on the after deck, improved habitability and increased fuel capacity.

Francis Marion will have a length over-all of 563 feet, a beam of 76 feet and a light displacement of 10,700 tons.

Visit with the Indian Navy

Just about every day, U. S. Navy ships make calls to foreign ports and in one way or another carry out our People-to-People program. A typical example of this was when the seaplane tender USS *Greenwich Bay* (AVP 41) put into the seldom-visited port of Cochin, India.

During the visit, the white seaplane tender — flagship of COMIDEASTFOR — dressed ship and held an all-day open house for more than 1500 visitors. The Indian naval fleet which was anchored in Cochin harbor responded to the visit by displaying their vessels in "dress ship over-all." Jet planes buzzed over the U. S. flagship during the day, adding to the military impressiveness of the occasion.

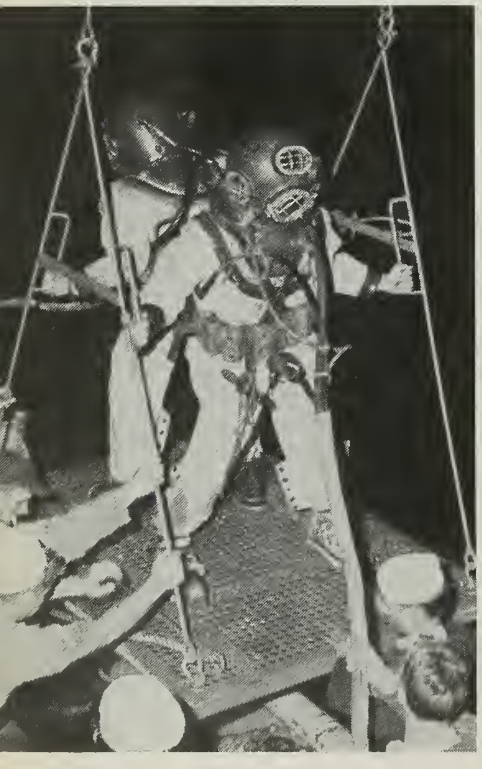
Orphan and other children groups, as well as the local citizenry and personnel of the Indian navy were taken on conducted tours of the ship. As crew members of *Greenwich Bay* assisted guides, answered questions and demonstrated equipment, continuous entertainment was provided for the visitors in other areas of the ship. This included a musical show on the fantail which featured shipboard talent. The universal appeal of music seemed to overcome any language barrier, for the hill-billy, rock-an'-roll and pop music artists of the seaplane tender never had a bigger or more appreciative audience.

Movies and refreshments were available for the guests on mess decks and in the wardroom. The children were treated to cartoon-type movies, ice cream and small gifts which included miniature U. S. flags. The youngsters got quite a kick out of the ship's mascot—a parrot.

The Indian navymen and local VIPs were shown Department of Defense films in the wardroom and were honored at a luncheon on the forward boat deck.

Activities throughout the day were not confined to the ship. Ashore, teams from *Greenwich Bay* played a basketball game with an Indian navy team and put on exhibitions of softball and touch football games before large crowds. Later in the afternoon and evening, the U. S. sailors were entertained by the Indian navy. They were taken on sightseeing tours of Cochin, treated to supper and a dance.

TWO OF A KIND—Double load of Navy divers in deep sea diving gear are lowered for requalification test.



Propellant Motor for *Polaris*

A contract has been awarded at the U.S. Naval Propellant Plant, Indian Head, Md., providing facilities for pilot line assembly and loading of a propellant motor for possible use in the *Polaris* missiles.

The construction project, which is expected to start some time around the end of the year, will be under direction of Potomac River Naval Command's public works officer.

NESEP Honor Students

Navy and Marine enlisted men attending colleges under the Navy's Enlisted Scientific Education Program have earned recognition for their scholastic attainments.

Last fall 10 Navy and Marine students began the battle of the books at Alabama Polytechnic Institute. To date six have made the Dean's List and have been tapped for Phi Eta Sigma, a national freshman scholastic honorary fraternity. The other four came close to achieving the same honor.

The 10 enlisted men attending API were among 103 selected for the NESEP from Fleet applicants last year.

Spectator Turns Life-Saver

Quick action and tireless effort by a Barber's Point, T. H., sailor probably saved the life of a Hawaiian civilian recently and won for himself the American Red Cross's Citation of Honor.

Jimmie W. Crum, AM2, assigned to AIRBARSRON Two, was presented the Red Cross citation by General Alfred M. Gruenther, USA (Ret.), President of the American Red Cross, during ceremonies at Fort DeRussey in Waikiki.

The life-saving incident happened at Makaha Beach, Oahu, during the evening of the last day of the 1958 International Surfing Meet.

Crum, who was a spectator at the event, said he spotted a man about 50 yards offshore, face down, atop the crest of a high wave. "A few moments later he'd disappeared beneath the surface," he said. "I dived in, and after a few seconds, found him on the bottom, doubled up and unconscious. When I got him near the beach the real trouble began. He was a big guy and due to the backwash and the strong undertow, I couldn't land him. Soon a party of two or three men came in and helped me get the victim on the beach."

The victim was loaded into an Army ambulance and was taken to the naval dispensary at Barber's Point and then to the Army's Tripler Hospital in Honolulu.

During the entire trip from the beach to Tripler Hospital, Crum alternated with attendants in ministering emergency life saving aid to the stricken man, who was unconscious. Three hours after the rescue, the victim regained consciousness.

DD DISC JOCKEY—M. Young, ET1, at mike, and B. Furst, SK1, make record broadcast. *Rt:* Midnight raid on icebox.

Pops and Popcorn

SHIPS OF A CLASS start their Navy career looking the same on the inside and out. The outside remains basically the same—but inside, a ship shows her own personality as well as the creative ability of her crew, and becomes more than just another ship of her class.

Such a ship is the destroyer USS *Rupertus* (DD 851) whose proud crew has endowed her with a five-piece band, popcorn at movietime, a daily newspaper, radio station and a plush First Class PO lounge.

Popcorn for moviegoers came to the DD in this way. Crew members felt a movie didn't seem like a movie without a bag of popcorn, so before the destroyer left Long Beach for a tour in the Western Pacific her skipper, CDR W. A. Campbell, Jr., USN, purchased 500 pounds of unpopped corn. Commissarymen in *Rupe's* galley volunteered to pop it and the shipfitter shop designed and built a special popper. At the ship's first movie the munching began. Sales soon began to mount, with proceeds going into a special recreation and welfare fund for benefit of the crew.

The closed-circuit radio station is the pride and joy of the ship's crew. Station KPAL, second in existence aboard a DD, was built from discarded spare parts from radio and electrical shops on the ship. The station was pieced together and is managed by Malvern Young, ET1, USN.

As if this wasn't enough to make a small ship swell with pride, USS *Rupertus* also boasts of a First Class PO's lounge that is the envy of Pacific Fleet destroyers. Hard work, ingenuity, and funds donated by its 23 members turned a compartment into a comfortable relaxation area, with TV, refrigerator and Hi-Fi.

The crew of this small ship has done a big job to make *Rupertus* more like home.

FIRST CLASS lounge aboard USS *Rupertus* (DD 851) is put to use. *Above:* B. Arenas, CS2, prepares popcorn for destroyer's moviegoers on cruise.

YOKOSUKA NAVAL BASE

YOKOSUKA NAVAL BASE, one of the largest and best equipped in the Far East, is endowed with a lineage that dates back to the days of the Civil War in the United States.

Situated 10 miles south of Yokohama on the Miura Peninsula, Yokosuka (1958 population, 288,000) was formerly the headquarters of the Japanese Yokosuka Naval District. Today, as every well-traveled Navyman knows, it has been designated as the major base in Japan for the U. S. Navy.

Oddly enough, its development stemmed from a distinctive foreign influence. Long admirers of the French style of engineering, the Japanese Shogunate hired a Frenchman named Verni to plan and execute its construction.

In 1865, when Verni began work, Yokosuka was an out-of-the-way fishing village. Its name held little or no significance to the majority of Japanese, to say nothing of foreigners. Commodore Perry, himself, who explored the waters in the vicinity 12 years before, made no mention of its existence in any of his chronicles.

Verni was given a free hand and by 1872, when the famed Emperor Meiji ascended to power, Verni's work had progressed to a point where one drydock was fully completed. Despite sweeping changes in many fields, Emperor Meiji encouraged Verni's work. When the French engineer retired in 1876, another drydock had been added and a gunboat launched. Shortly after came the base's first cruiser.

The expansion program, which was continued along French lines, reached new heights during the Sino-Japanese and Russo-Japanese wars at the turn of the century.

By 1907 the base and shipyard had extended to the neighboring town of Taura, three to four miles away, and the first all-steel battleship had been completed. Its 20,000-ton displacement made it one of the largest battleships in the world.

During World War II, Yokosuka Naval Base reached the pinnacle of its existence. More than 40,000 Japanese civilians were employed within the base. The city of Yokosuka mushroomed in size to hold this tremendous influx of personnel.

Entrances to the base were heavily guarded and strict security regulations were enforced. Certain areas, such as Drydock Six, where the huge carrier *Shinano* was under construction, were concealed by high fences, and entrance to them could be made only by specially issued passes.

So secretive was the work regarded within the base that often special agents mingled with the workers living in Yokosuka City to insure that no word was spread about what they had seen or were working on within the base.

Veteran workers at the shipyard can recall only one occasion when the base was subject to bombing runs in World War II. On 18 Apr 1942, Drydock Five and a seaplane tender nestling within it were bombed out.

During the rest of the war, bombings were confined to ships either inside or outside the harbor. This prompted a series of rumors among the Japanese people in the vicinity: "Move to Yokosuka and be safe. The Americans are sparing it for their future base!"

On 30 Aug 1945, with 896 Allied ships in the Yokosuka Harbor, some 20,000 British and American Marines and sailors (including Seabees) landed amidst the wreckage and debris. In the wake of war they found damaged machinery, sunken hulks and tons of scrap.

Seabees and Salvage Group I were ordered to clear the rubble. Rebuilding got underway. The Salvage Group removed thousands of tons of scrap iron and materials, and turned most of it over to the Japanese to strengthen their economy. They raised hundreds of sunken hulks. A Japanese destroyer, which had been sunk at Berth 8, was refloated and towed away.

Two years later, most of the arsenal had been returned to the Japanese nation for industry. The U. S. Navy and Marine Corps remained only at the Azuma Island Tank Farm, the Oppama Seaplane Ramp, and the shipyard on Yokosuka Peninsula.

Symbolizing a new trend and new hope for the Japanese people, buildings which once housed war equipment were converted into schools and churches. A building once used as a construction school was converted to a convent, and what had once been a military engineering school became a civilian school.

Demilitarization brought the melting down of torpedoes, guns, shells —even 151 midget submarines. Tons of explosives were junked at sea. In 1946 Navy divers uncovered what must have looked like Captain Kidd's buried treasure. Beneath the bay were tons of gold bars that had

BIRD-LIKE—Cranes in Yokosuka drydock area make repairs on Navy ships.

been bulldozed into the bay and covered with coal (see ALL HANDS, March 1959, p. 45).

Later, a ton-and-a-half of mercury and about seven tons of silver bars, which the foundry had buried shortly before the surrender, were also uncovered. The Navy returned this metal to the Japanese. Such acts as this and many others helped to build up a friendly feeling between the peoples of Japan and the U. S.

Less spectacular than buried treasure, but more noteworthy, was the day-by-day rebuilding that brought results evidenced as early as a year after the end of the war. Yokosuka began to drydock and repair ships and supplied all logistics for the U. S. Navy ashore and afloat in Japan.

With the outbreak of the Korean conflict, reconstruction of U. S. Fleet Activities rapidly increased. Japanese shops were reactivated to meet the demands of the United Nations Forces in Korea.

The U. S. Naval Hospital, which had been used as a dispensary, shifted into high gear almost overnight to treat thousands of war-wounded men. During this period, the hospital served as many as 4388 men at one time.

The Naval Supply Depot carried its share of the load by establishing an aviation supply branch to support all Naval and Marine Corps aircraft in the area.

Since the Korean crisis, U. S. Fleet Activities has continued to build; but it isn't always something as tangible as shops and other structures. It is something much harder to come by—the goodwill and mutual understanding of the host country.

AIRMAN'S EYE-VIEW—Looking south over Yokosuka peninsula and U.S. Fleet activities shows the extent of the area and its naval facilities.

Sports competition between Americans and Japanese are encouraged. An annual swimming race across Tokyo Bay, a yearly relay race around Minura Peninsula, baseball, football, and judo matches round out the sports program.

In addition, the Fleet Activities band has played jointly with Japanese bands. The Black Ship Festival, biggest and probably the most colorful event of the year at Yokosuka, is participated in by both Japanese and Americans.

Today U. S. Fleet Activities has some 18,000 Japanese civilian employees who work in almost every department of the huge installation. Rear Admiral Frederic S. Withington, USN, Commander U. S. Naval Forces, Japan, also maintains his headquarters there.

Yokosuka today is a lot different from the tiny fishing village of the 1860s when the Frenchman Verni started his development project. The naval base which has seen the mightiest ships of two nations is playing a significant role in a day-by-day people-to-people program between Japan and the United States.

YOKOSUKA SCHOOLS—U.S. Navymen practice plot in QM school. *Rt:* Japanese sailors run a problem at school.

SERVICESCOPE

Brief news items about other branches of the armed services.

THE AIR FORCE's new 3600 mph X-15 research plane has made its first flight as a guest of a B-52 mother plane.

The X-15 was carried to 38,000 feet for aerodynamic and systems check and for crew familiarization. After the 70-minute in-flight checkout, the B-52 landed at Edwards AFB with the X-15 still suspended under the right wing from a specially built pylon.

Next step in the pre-acceptance trials being carried out by the builder and the Air Force will be a glide flight. The X-15 will be released from the mother plane and then glide to a landing at Rogers Dry Lake Bed, Calif. The first powered-flight will not be scheduled until all preliminary ground and air checks of systems and equipment are satisfactory.

Before X-15 could be carried aloft, the B-52 mother plane underwent certain modifications. A section of the bomber's right wing was cut out to make room for the wedge tail of the X-15. The pylon was installed midway between the inboard engines and the fuselage.

For future tests, a closed circuit television system trained on X-15 has been installed to keep close watch of the research plane before it is released.

The X-15 is not expected to be flown at its top speed of over 3600 mph or taken to 100 miles into space until after it has been accepted by the Air Force.

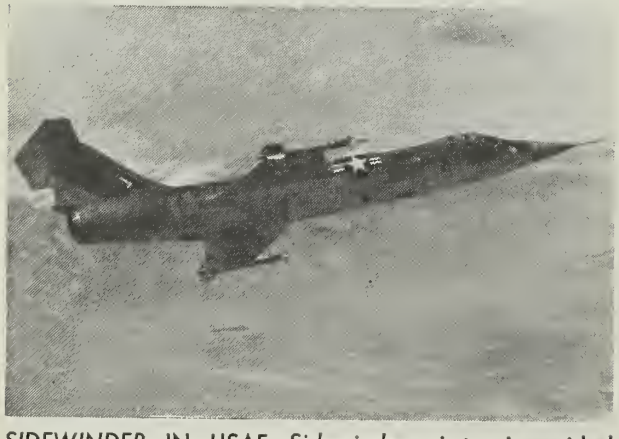
The X-15 program is a joint endeavor of the Air Force, NASA and U.S. Navy.

★ ★ ★

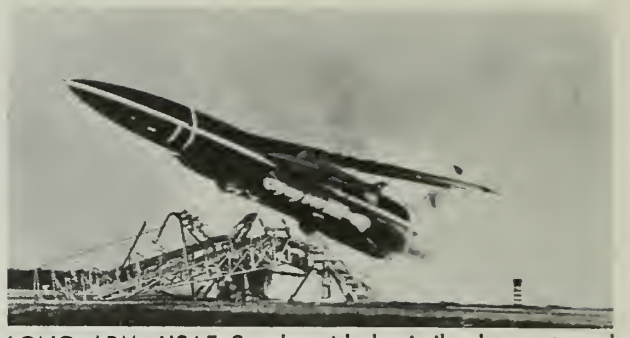
THE ARMY HAS BUILT a single large-scale aircraft model in connection with the development of its new tilt-wing research plane and a "deflected slipstream research aircraft." The model is constructed for wind tunnel research, and has the general configuration of a cargo or transport aircraft. The wing span of the huge test model is 35 feet and its over-all length is 27 feet. It weighs 14,000 pounds.

Its high tiltable wing mounts six propellers and has two flaps for deflecting propeller slipstream. The propellers are driven by a 1000-horsepower electric motor mounted in the fuselage.

The wingtip panels on the model can be detached in order to permit tests with four propellers at reduced wing span. Shafting between propeller gear boxes can be easily disconnected for testing with two, four or six propellers.



SIDEWINDER IN USAF—*Sidewinder* air-to-air guided missiles carried aloft on wing tips of F-104A *Starfighter*.



LONG ARM—USAF *Snark* guided missile demonstrated intercontinental power, blasting target 5000 miles away.

The Army has delivered the model to the National Aeronautics and Space Administration Research Center at Langley, Va., where it will undergo extensive testing in a full-scale wind tunnel.

The joint Army and NASA tests are expected to yield information on wing and propeller efficiencies, control effectiveness and aerodynamic loading.

★ ★ ★

THE AIR FORCE is involved in a project to unlock the secrets of weather. The project will test the latest inventions in scientific sensing and electronic equipment mounted in a pure jet transport plane. Weather data from the ground up to 150,000 feet will be continuously collected, analyzed and transmitted to the ground.

The cabin of the test plane will be a flying laboratory during the global weather reconnaissance. In their atmospheric search around the world the observers of the Air Weather Service of the U.S. Air Force will maintain a flight plan of up to 55,000 feet. They will probe the weather below the plane with parachuted "dropsondes," and the weather above with rockets to carry an instrument package to the upper atmosphere.

These expendable instruments will be ejected from the rear of the aircraft and will radio their data back to it for recording, computing and transmittal to the ground stations. The dropsondes will descend at an average rate of 75 feet per second and their data can be received by radio up to 125 miles away. The rockets will rise nearly 10 miles before starting their parachute descent with their instrument package. These rocket packages will be approximately six feet long, six inches in diameter and will weigh 120 pounds.

Two kinds of radar will be used for measuring cloud formations and storms. A "C" band will permit detection of storms as distant as 150 miles and allow 15 to 20 minutes' observation of them. A "K" band with dual antennas will measure the bases and tops of cloud layers with precision from the ground to 100,000 feet.

All data, both raw and processed, will be permanently recorded on magnetic tape. It will then be fed into a general purpose digital computor of extreme flexibility for correction, computation, and correlation as required.

★ ★ ★

A NEW PIPE TRANSPORTER will enable the Army to get liquid fuels to military equipment in the field with

a considerable saving in time and manpower.

Developed by the Army Engineer Research and Development Laboratories, Fort Belvoir, Va., to speed the stringing of pipe, the transporter consists of a standard two-and-one-half-ton ordnance tractor with a six-ton trailer. A hydraulic boom is mounted behind the tractor cab to be used in unloading the pipe from the trailer. The trailer is fitted with a bin for carrying grooved couplings, complete with gaskets, nuts and bolts.

The new transporter will replace a truck-drawn, one-and-one-half-ton trailer from which pipe is now unloaded manually. It has three times the cargo capacity of the old trailer.

Although the new equipment requires less manpower to operate, it makes it possible to string pipe in about one-third the time.

★ ★ ★

THE FIRST THREE SQUADRONS of Air Force F-106 *Delta Dart* fighter-interceptors will operate out of McGuire AFB, N. J.; Geiger AFB, Wash.; and Andrews AFB, Md.

The all-weather aircraft, in the Mach-2 speed range, is similar in appearance to the F-102 *Delta Dagger.* It will be armed with the *Falcon* missile, and can also carry the *Genie,* an air-to-air atomic rocket. Its range and speed enable it to intercept hostile planes well away from their potential targets.

Through an advanced radar armament control system, the *Dart* will be able to seek out and destroy unseen targets while under the almost complete control of SAGE computer centers. Its 15,000-pound-thrust engine can push it to altitudes and speeds at which it can intercept any present-day manned bomber.

★ ★ ★

A NEW LIGHTWEIGHT, compact pathfinder beacon light designed to mark assembly points for airborne troops has been developed by the Army.

The beacon light is fitted into a 30-inch carrying case which contains a 12-volt rechargeable battery and coding sequence. Capable of being dropped from the air, the entire unit weighs only 20 pounds.

The pathfinder can be erected and operated by one man. When in use, the light is mounted on a telescoping mast which can be extended to 23 feet. Six signal lenses are provided in white, red, amber, green, blue and infrared.

WARM SUBJECT—Army 'camera' under development creates image without light by using infrared device.

The infrared range of the beacon light is two miles when viewed from the ground. It has a visible light range of five miles when viewed from an altitude of 1000 feet.

The beacon light was developed by the Army's Engineer Research and Development Laboratories, Fort Belvoir, Va., and is being tested at Fort Bragg, N. C.

★ ★ ★

THREE NEW SITES for the launching of intercontinental ballistic missiles have been selected by the Air Force. Those firing *Titan* are near Ellsworth Air Force Base, S. Dak., close to Rapid City; and Mountain Home AFB, Idaho. The latest launching base for *Atlas* is located at Schilling AFB, Kans., near Salina.

Selection of each site was to enable the Air Force to utilize one of its existing bases for support.

So far, the Air Force has announced the selection of 10 ICBM launch sites near the following AF bases. Those housing *Atlas* are: Francis E. Warren, Wyo.; Schilling, Kans.; Vandenberg, Calif.; Forbes, Kans.; Offutt and Lincoln, Neb.; and Fairchild, Wash.

The ICBM launch sites for *Titan* are: Lowry, Denver, Colo.; Ellsworth, S. Dak.; and Mountain Home, Idaho.

SOLDIERS AT SEA—Men of 4th Inf. Div. and jeep leave *USS Thetis Bay* (CVHA 1) during "Operation Rocky Shoals"

THE WORD

Frank, Authentic Advance Information On Policy—Straight From Headquarters

• DC AND ESF RATING CHANGES —SecNav has approved these rating structure changes for Damage Controlman and Fire Fighter:

Redesignate as a general rating at all pay grades the present general service rating of Damage Controlman (DC).

Disestablish the emergency service ratings of DCG (Shipboard Damage Controlman), DCW (Carpenter's Mate) and DCA (ABC Defenseman).

Redesignate as an emergency rating the exclusive emergency service rating of Fire Fighter (ESF).

The effective date for the changes has not yet been announced.

Personnel of the Naval Reserve in the disestablished DCA, DCW, and DCG emergency service ratings will convert to the new general rating of Damage Controlman (DC). Ample time will be given for those planning to advance in rating. For those who will remain at the same pay grade, the conversion to DC will be done administratively.

• PROMOTED TO WARRANT — A total of 12 first class and 21 chief petty officers have been issued temporary appointments to Warrant Officers, W-1.

Regular Navy appointments were broken down into the following designators: Boatswain (7132), eight; Aviation Ordnance Technician (7212), one; Ordnance Control Technician (7242), four; Machinist (7432), six; Aviation Electronics Technician (7612), one; Communications Technician (7642), one; Electronics Technician (7662), two; Ship Repair Technician (7742), two; Ship's Clerk (7822), one; Medical Service (8172), six; and Civil Engineer (8492), one.

These appointments were made from the eligibility list established by a selection board that convened in February 1958.

• NEW INSURANCE HANDBOOK— An *Armed Forces Insurance Handbook* (NavPers 15917) has been distributed to insurance officers throughout the Navy to aid them in counseling personnel in their financial security and insurance needs.

This publication was adapted from the *Handbook of Life Insurance*, published by the Institute of Life Insurance.

The 33-page armed forces insurance book has seven sections: Government Insurance and Servicemen's and Veterans' Benefits; Life Insurance; Individual Policies and Their Uses; Annuities; Buying Life Insurance; Getting a Policy; and Insurance Programs. Pointers to policyholders and a glossary of insurance terms are also included.

Although distributed for the use of insurance officers, the handbook is written for you, the policy holder. If you have any insurance problems, see your insurance officer. He'll find the answer in NavPers 15917.

• PHOTOGRAPHER'S CREDIT LINE —If you are a Navy photographer, chances are that some of your material has been used world-wide on TV, in magazines, in newspapers and displays. The credit line says: "Official U. S. Navy Photograph." That is in keeping with "preserving the anonymity of naval photographers," as it says in the *Manual of Naval Photography* (OpNav Inst. 3150.6A).

However, have you seen Para. 0726 in the *Manual*? Here is what the paragraph says about credits:

"There is no objection to crediting naval personnel for photographs used in service publications such as ALL HANDS, NAVAER News, station papers, etc., provided that the photographer's rate or rank and the term 'Official Photograph — U. S. Navy' are included in the credits."

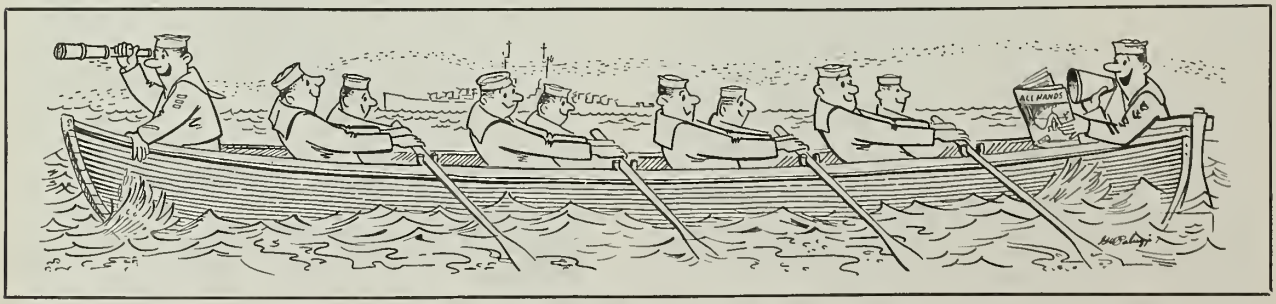
ALL HANDS would like to give you credit for the pix you're proud of —and some fine ones have been coming in. Whether you take them officially or are a shutterbug in your spare time, how about asking your PIO to add your name on pix that are sent to ALL HANDS? We like 8 x 10 glossies (no negative required), with captions and identifications as called for in the *Manual of Naval Photography*.

• SPECIAL SUBMARINE TRAINING —Nuclear power and Fleet ballistic missile submarines are modern underseas ships. For most Navymen, there is excitement in just the thought of serving aboard.

For enlisted men in six different Navy ratings this can be reality and not just a wish. Men who are IC and EN in pay grades E-4 through E-6, and ET and EM in pay grades E-4 through E-7, are needed both for nuclear-powered submarine training and for Fleet ballistic missile submarine training. In addition, SOCs and RMCs are needed for Fleet ballistic missile submarine training only.

Anyone in the above rates interested in this special training should first refer to BuPers Inst. 1540.2C. That's where the requirements are published. If you are eligible, forward your application, via chain of command, to the Chief of Naval Personnel (Attn: Pers B2131) by 1 Aug 1959.

If selected, you will first enter basic submarine school. At the end



PULLING TOGETHER — The whole crew will get the word when you pass this copy of ALL HANDS along.

of that school, you will be able to apply for the advanced training in the special programs. Almost every eligible man who applies from basic submarine school is selected for the advanced training.

After graduation, volunteers home-ported or based in New London, Conn., Norfolk, Va., Key West, Fla., or Pearl Harbor, T. H., may return to earlier duty station, provided service requirements permit.

• **TRAILER ALLOWANCES** — There has been some confusion over eligibility for trailer allowances.

As stated in Chapter 10 of the *Joint Travel Regulations*, the purpose of a trailer allowance is reimbursement for the cost of transporting a *house* trailer or mobile *dwelling* at personal expense. The term "house trailer," as used in *Joint Travel Regs*, includes all types of mobile dwellings constructed for use as residences and designed to be moved overland.

Contrary to the statements implied in some advertisements about the rental of utility trailers, the allowance is *not* authorized for baggage, utility, camping or farm trailers.

• **CHANGE TO NAVY REGS**—Under Change No. Eight to *U. S. Navy Regulations, 1948*, quite a few leaves are to be inserted to bring its pages up-to-date.

The insertions cover such additions or modifications as the following:

Article 0740—Sets forth procedure for acquainting members of the armed forces with the Code of Conduct.

Art. 0790—Delineates specific responsibility of commanding officers of naval stations or shipyards for safe berthing of ships in commission which are undergoing overhaul, or are immobilized for other reasons.

Art. 1041—Waives requirement for maintaining the engineer's bell book when a ship is engaged in certain operations and being operated from remote controls located outside the engineering spaces.

Art. 1201—Includes Navy and Marine Corps Directives Systems in list of regulatory publications for the Department of the Navy.

Art. 1205—Authorizes the Secretary of the Navy to delegate to chiefs of bureaus and offices the authority to approve changes in manuals and similar directives.

Art. 1223—Modification made to conform with the Geneva Convention of 1949 regarding treatment of prisoners of war.

Art. 1301—Article made to conform with the Warrant Officer Act of 1954 and to reflect the language of Title 10, U. S. Code.

Art. 1603—Change in the designation of the Navy Department from an "executive department" to a "military department" in accordance with an amendment to the National Security Act of 1947.

Art. 1701—Prohibits the president or senior member of a court-martial, court of inquiry or other military tribunal from submitting a concurrent report of fitness on a member of the tribunal.

Art. 1929—Concerns changes to provisions for withholding pay during absence due to use of alcohol or drugs.

Art. 1963 — Permits cognizant Fleet commander to except specific ships from the requirements of an annual supply inspection.

Art. 2105 — Concerns the performance of the United States nationl anthem when a foreign anthem is also performed.

Art. 2139—Prescribes "full dress" uniform when receiving officials entitled to a gun salute of 11 guns or more.

Art. 2141—Prescribes "full dress" uniform when receiving certain officials entitled to 19 guns.

Art. 2155—Prescribes dress uniform for members of the Marine Corps on occasions when full dress is prescribed for naval personnel.

Art. 2184—Provides for display of senior officer present afloat (SOPA) pennant.

Art. 2189—Concerns the wearing of mourning badges on military uniform by naval personnel while in foreign countries whose governments are observing periods of national mourning.

Art. 2191—Concerns honors and ceremonies to be rendered upon the death of United States civil officials.

Art. 2192—Concerns honors and ceremonies to be rendered upon the death of persons in the military services.

In addition to the above, a considerable number of lesser revisions have been incorporated in the *Regulations* by change No. Eight. In most cases distribution of the latest changes has been completed.

QUIZ AWEIGH

This month's Quiz Aweigh deals with modern weapons, age-old customs and some of the technical aspects of the Navy. Check yourself with the following questions and see how well versed you are.

1. Zuni, which is now in Fleet use, is a high-velocity, five-inch, air-launched (a) rocket, (b) ASW weapon, (c) guided missile.

2. This weapon gives our attack aircraft the striking force of several salvos from the main battery of (a) DD, (b) CA, (c) CLG.

3. A boatswain's mate of the watch always wears one piece of equipment that is as traditional as his fouled anchors. It is called (a) Boatswain's Pipe, (b) Boatswain's Call, (c) Boatswain's Whistle.

4. The call that is piped by a BM to call away a boat or to bring a division to quarters is called (a) All Hands, (b) Boat Call, (c) Stand-by.

5. The Navy agency or bureau responsible for defense against atomic, biological and chemical warfare ashore is the (a) Bureau of Ships, (b) Bureau of Yards and Docks, (c) Bureau of Medicine and Surgery.

6. The Naval technical assistant responsible for matters dealing with patents, copyrights and royalty payments is the (a) Chief of Naval Material, (b) Chief of Naval Research, (c) Judge Advocate General.

If you're out of tune you'll find the answers to this month's Quiz Aweigh on page 49.

THE BULLETIN BOARD

Chichi Jima Is a Good Example of Life on a Small Navy Base

IF YOU'VE EVER heard of Chichi Jima you may have a vague idea that it's not much more than a spit of sand and rocks sticking up out of the water. In this case, scuttlebutt is more or less right. The whole establishment is no more than five miles long by two miles wide.

Nevertheless, the island is important enough for the Navy to maintain a naval facility and, according to our on-the-spot correspondent, it's an ideal haven for the man who wants to get away from it all. Because Chichi Jima is more or less typical of a number of small Navy establishments, we present here a reasonably detailed description of living conditions to be found there.

Chichi Jima is located in the center of the Bonin Island chain at about 27 degrees north and 142 degrees east. It is about 500 miles south of Japan and 850 miles north of Guam. The chain consists of three main islands and extends north and south for about 60 miles. The largest island of the group is also the southernmost and is called Ha Ha Jima. Next in size is Chichi Jima, and the most northern of the group is Muko Jima. There are also numerous smaller islands.

There are three communities on Chichi Jima at the present time. Omura is on the west side of the harbor and includes most of the Navy buildings. The Navy community, Sukoshi Village, is just a short distance north of Omura.

Since it is out of the tropics, the island has a somewhat cooler climate than Guam or Honolulu. During the winter months, the temperature may fall as low as 50 degrees. During the summer—July and August—the days are tropically hot, but it does cool off somewhat during the evening.

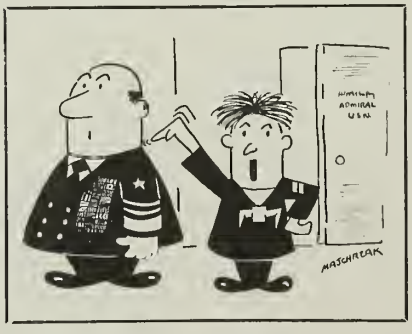
Housing—There are 13 houses available. All are quite small, but it doesn't matter much as most of your living will be done out of doors, anyway. Concurrent travel should be requested from COMNAVMARIANAS. Information on the availability of immediate housing will be furnished by the Officer-in-Charge of the naval facility upon request.

All houses are equipped with 110 volt, 60 cycle electricity, which is suitable for most household appliances. Kitchens are equipped with electric stove, refrigerator, deep freeze and washing machine. You will need dishes, ironing board, cooking utensils and any other household appliances which you feel would be necessary for your convenience. Airtight plastic food containers are very handy. There are temporary kits of dishes and cooking utensils which are available until your household effects arrive.

The living room is furnished with rattan furniture, consisting of sectional sofa, easy chairs, tables and lamps. There is a kerosene heater for the cooler months and three electric fans for summer. You are advised to bring throw rugs or fiber rugs. If you would like to have a living room rug, a 9 x 12-foot rug will fit. The living-dining room and bedroom windows are furnished with natural raw-silk drapes. If you have any pin-up wall lamps, they are very handy.

The majority of the houses have two bedrooms, but there are a few three-bedroom houses. Each bedroom is 10 by 11 feet with three windows in each. They are furnished with rattan chests and hollywood beds with mattresses and pillows. Bring your bed linens and bedspreads; blankets are necessary in the winter. Small throw-rugs fit nicely in these rooms.

All-Navy Cartoon Contest
D. J. Majchrzak, DN, USN



"Hey, Mac, how soon before a man can make chief around here?"

Commissary—The commissary is supplied by Guam. Staple canned goods are kept in stock regularly although all brand names are not available. Frozen foods are also stocked regularly. This includes meats such as beef, pork, and luncheon meats. Cuts are limited to the standard steaks, chops and roasts. Other frozen foods are vegetables, TV dinners, juices and seafoods which are limited in variety.

Fresh produce, such as potatoes, celery, tomatoes, carrots, onions, cucumbers, oranges, apples, grapes, lettuce, etc., are kept in stock dependent on logistic vessels and seasons. During the period December through June the islanders produce good supplies of such vegetables as tomatoes, lettuce, cabbage, cucumbers, small green onions, and melons, which are sold at reasonable rates. If you have any special formula for the baby, bring a year's supply with you.

Merchandise other than food can be ordered through the Ship's Store in Guam.

The fresh water supply is normally plentiful. It is chlorinated and bacteriological tests are conducted from time to time by the Navy Hospital in Guam.

Schools — The Arthur Radford School, located in Omura Village, is conducted for both local and military children. Classes are conducted from kindergarten through the seventh year. Teachers are civil service employees.

Accredited Calvert correspondence courses may be procured for children past the seventh year. Each mother teaches her own child in this case.

Churches—A missionary is present on the island and conducts regular church services. A Catholic chaplain visits the island once every quarter from Guam and conducts services for personnel of the Catholic faith.

Recreation—An EM Club (GinKo-Kai) has recently been added to

the recreation facilities. It is open six days a week with a bar, and limited recreation facilities. These are constantly being improved as funds become available. Chichi Jima is ideal for those who enjoy quiet family life and outdoor life as well. Navy movies are shown six nights a week with no admission charge and community Bingo games are held every Thursday night in the EM Club. Welfare and Recreation dances during the winter months and beach parties during the summer are held about once a month.

A library with over one thousand books on many varied subjects has recently been added. This is open to all military personnel and their dependents.

This island is surrounded by excellent fishing grounds. Navy boats may be checked out at almost any time for off-duty fishing trips. The smaller "bottom fish" can be caught from the shore at several easily accessible points in the harbor. Some deep-sea fishing gear is available, such as hand lines and plugs, but if you are a fishing 'bug' we suggest you bring your own.

There are several fair swimming beaches inside the harbor but most of the swimming is done from the small boat landing. A limited number of skin diving sets are available.

A $5-license must be purchased from the Council before hunting goats or pigs, and a complete copy of the island rules should be studied for more details. Personal firearms are allowed but must be registered with the Officer-in-Charge.

Because of the small number of personnel attached, individual hobbies are encouraged. The Navy carpenter shop is available almost any time for personal use. The dispensary Xray darkroom is available for photographic use, but no equipment is on hand. One of the favorite weekend pastimes is mountain climbing and hiking. Shopping trips to Guam and Japan may be taken from time to time.

During your tour of duty here you and your family will probably want to visit Japan. Leave is granted by the Officer-in-Charge for this purpose and you travel on an LST. Passports and proper Japanese visas are required. The Personnel Office will help you.

Mail and supplies are brought by small ships (AKLs) every three weeks and personnel and mail are also carried on non-scheduled plane flights from Guam.

Locally there are no facilities or use for private vehicles. Because of the mountainous terrain the roads leave much to be desired. Most exploring about the island must be done on foot. Bicycles are handy means of transportation in the island's inhabited areas.

Medical Facilities — One medical officer and hospitalman are stationed here. The new dispensary is equipped to handle the majority of minor ailments and all emergency situations. Major illnesses are referred to the U.S. Naval Hospital, Guam. Obstetrical cases are handled in the dispensary.

A dentist is assigned from Guam approximately every four to six months. Be sure that you have all major dental work done before you depart continental U. S.

EM's Selected for Training At Naval Preparatory School

Four hundred twenty-seven Navy and Marine Corps enlisted men have been selected to attend the Naval Preparatory School, Bainbridge, Md., in May for academic refresher training. From this group 160 will be picked for NROTC training at one of 52 colleges or universities.

The selections were made on the basis of tests conducted throughout the Fleet last December, and the review of each candidate's service record.

In addition to those enlisted candidates to be chosen for NROTC, 1388 civilians will be picked for the Navy-sponsored college training program. Candidates successfully completing the four-year NROTC course are eligible for commissions in the Navy or Marine Corps.

Another test to obtain candidates for the 1960 NROTC program is scheduled for this December.

HOW DID IT START

Naval Photographic Center

This year the Naval Photographic Center at Anacostia, D. C., is marking its 16th anniversary. Designed in 1941, the Center began full-scale operation in February, 1943.

The Center supervises the production of Navy training films and maintains central motion picture, aerial and still photo libraries. It has a fully equipped sound stage and a staff of animators, writers, editors and all the other technicians required for making training films, plus a still department for all phases of black-and-white, color and aerial work.

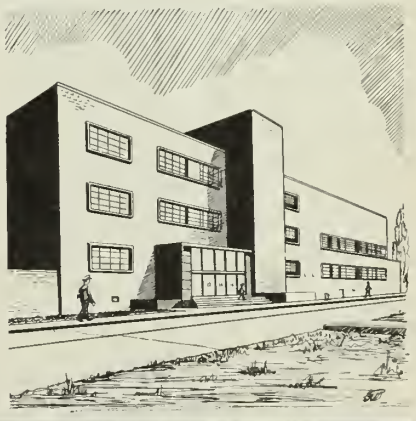
It is the Navy's mass production plant for still and motion picture photography. Originally the plant cost about three million dollars. Today, with additions to both building and equipment, it's worth about six-and-one-half million.

NPC's Test and Evaluation Department helps the Navy keep abreast of the latest developments in photography. To test equipment under all sorts of conditions it has a special tropical test room and a refrigerator capable of lowering the temperature to 80 degrees below zero.

Most of the people at NPC are old hands at photography. Many of the Navymen stationed there are real specialists, whose careers have included several tours of duty at the Center or whose pre-Navy training has given them special qualifications. Quite a few hold degrees in cinematography, journalism, radio, television and still photography, and a good number were trained by commercial firms before entering the Navy.

These specialists have accomplished a great deal during the Center's short history. As a visitor enters the building, one of the first things he is likely to see is a list of awards won by NPC productions in international film festivals at Cannes, Edinburgh and Venice.

For the people who work at the Center the list is a constant reminder of the high standards which they help to build and maintain.



If You're Not a Sea Lawyer, This Information May Help You

Law is complicated. As a layman you may feel it is too complicated to bother with. But with so many common regulations such as speed laws and parking laws, you have no choice. And since you have no choice, there are a few things you should keep in mind that may save you some headaches.

As a reminder of these points, LCDR Nathan Cole, Jr., USNR, writing in the JAG Journal, has some legal tips which we're passing on to you.

THE AMERICAN SYSTEM OF LAW is, of necessity, filled with technicalities, exceptions, and conflicting rulings. Federal, state and local jurisdictions have laws, rules and regulations tailored to meet their particular needs and desires. These are not always consistent. You and your family are faced with this complex situation and, being basically transients, you can easily find yourselves legally entangled in a local situation. In a strange community with no friends or relatives to turn to, by the time you get to a lawyer—or legal assistance officer—you may be beyond help.

The law in a particular jurisdiction on a particular set of facts can usually be determined. The really important thing for you to do is be able to recognize and avoid problems which may involve you.

It is always dangerous to attempt to generalize and oversimplify a complicated and technical field. The following suggestions, however, are presented as old "tried and true" guidelines which are too often ignored.

• ***Insist on all business dealings being carried on in a business-like manner.*** (You can do this without carrying a chip on your shoulder.)

There is a tendency—by almost everyone—to accept the word of a perfect stranger at its face value, or to accept a vague, general statement without really knowing what is meant. To accept the word of your friends as binding is a normal and proper procedure. To do the same thing when you are buying a car or a refrigerator or leasing an apartment, however, is simply not good business.

Business transactions should be perfectly clear. All rights and liabilities should be clearly understood by both parties. If you don't understand the mechanics or effect of a transaction, you should never hesitate, for fear of embarrassment, to ask questions. If the person with whom you are dealing can't or won't answer your questions, then you should proceed with extreme caution. Tied in with this is the old problem of signing the blank form. No matter how honest you believe the other party to be, signing in blank is an unbusinesslike and dangerous practice.

• ***Always read completely and carefully anything you sign, before you sign it.*** Most contracts do not have to be in writing. As a matter of practice, however, a great many of them are. Many people will sign a lease, conditional sales contract, purchase contract or other document, without the slightest idea of what is included in the "fine print." The fact that you did not read an agreement before you signed is usually no defense.

• ***If you are entering into a written contract, insist that all the terms and agreements be written down.*** Suppose you have read and understood an agreement but want clarification or an additional clause? Don't be

WHAT'S IN A NAME

Guantanamo Bay

On the southeast coast of Cuba, an island known to the romantically inclined as the "Pearl of the Antilles," there exists one of the finest harbors in the world. Not too well known to present-day mariners other than U. S. Navymen, it was a frequent port of call in Spanish colonial days.

The harbor is La Bahia de Guantanamo — Guantanamo Bay — year-round site for Atlantic Fleet squadrons and ships undergoing shakedown and refresher training.

Historically, Guantanamo Bay came to view when Christopher Columbus entered it on his second voyage and spent the night of 30 Apr 1494. He and his Spanish adventurers were looking for gold and, not finding any lying loose on the beaches, they left the next day. Nevertheless, Columbus named the bay "Puerto Grande."

In the days of the Spanish Main, Guantanamo Bay was somewhat of a pirate stronghold. It is reputed that such piratical individualists as Naum, Sores, and Rosillo made it and Escondido Bay their base of operations for some time as they preyed on shipping as it passed through the Windward Passage. Legend has it that a famous pirate named Rosario, whose home port was New Orleans, was chased into the bay and took refuge some distance up the Guantanamo River.

At other times, Guantanamo Bay was used as a haven for ships bent on more peaceful missions. The *Noval History of Great Britain* (1779) describes the bay as "a large and secure haven, which protects the vessels that ride in it from the hurricanes which are so frequent in the West Indies."

During the Spanish-American War, a U. S. blockade of Havana harbor, followed by a Caribbean pursuit of the Spanish fleet culminated at the end of May 1898 in the bottling-up of the Spanish fleet in Santiago Bay, 40 miles west of Guantanamo, by the U. S. Fleet.

In 1903, the new Republic of Cuba leased to the United States the naval reservation on which the naval station was to be located. President Theodore Roosevelt signed the first lease agreement on 23 February. It was formally turned over to the United States government at noon 10 Dec 1903, on board USS *Keorsarge* in Guantanamo Bay.

Guantanamo Bay today is far different from the Gitmo of a few years ago. The community is now a city sufficient unto itself, complete with facilities for modern living, including churches, schools, movies, shopping centers, restaurants and cobblers.

These and other interesting facts are reported in "The History of Guantanamo Bay" by RADM M. E. Murphy, USN.

willing to accept the oral agreement of the other party that your additional clause will be all right. As a general principle, oral agreements do not modify the terms of a written document, and this may even be set forth in the agreement itself. You run the additional risk of having to recall, at some future date, just exactly what the oral agreement was. If it's written, there is no question.

• ***When you are planning to take some action, think ahead and visualize the possible complications or results of your proposed action.*** Surprisingly enough, people will do such things as sign a year's lease when they know they will be transferred in six months, or will contract to buy $300 worth of books when they know they can't afford them. The most frequent situation probably is simply a matter of overloading the family budget. So long as your credit is reasonably good, you can buy items on time.

The person with the fixed income may think he can budget down to the penny. He frequently forgets to take into account such contingencies as accidents, sickness, family difficulties, additional children, expense incident to transfer or leave. When these contingencies occur—and they frequently do occur, he is confronted with obligations and debts far greater than his income. Usually the only answer is borrowing and thereby incurring further obligations or having the property repossessed after a substantial portion of the purchase price has been paid. The result is complete financial collapse which in itself creates further problems. The average family should attempt to set aside at least five per cent of the net family income, after taxes, each month.

• ***Be careful about grabbing a "Big Bargain" unless you are familiar with the merchandise.***

Few, if any, business firms are giving anything away. Federal regulatory agencies manage to keep down actual frauds pretty well. The apparent bargains, however, may frequently be made possible by the sale of "off brands," by selling goods that are damaged or workmanship that is inferior, by providing no service, or by giving either no guarantee or a guarantee which is so weasel-worded it has no real meaning.

ANSWERS TO THIS MONTH'S QUIZ AWEIGH

(Questions can be found on page 45)

1. (a) Rocket.
2. (a) DD.
3. (a) Boatswain's Pipe.
4. (b) Boat Call.
5. (b) Bureau of Yards & Docks.
6. (b) Chief of Naval Research.

In most families it is necessary to shop for bargains, but if you buy for less than average market price, from other than an established reputable dealer, or for less than an unconditional guarantee, you may not be getting the "big bargain" you think you are.

• ***Learn the local laws and regulations.*** This applies particularly with respect to such things as automobile registration and licensing, operator's permits, taxation, allowing your dog to run loose, etc.

This is pretty elementary, yet many people inadvertently run afoul of the law simply because they didn't know about it. Your local government officials, Division of Motor Vehicles or Legal Assistance Officer can fill you in on this type of information.

• ***As a broad general principle, the serviceman, in his personal life and dealings, stands in the same position as a civilian.*** There has been, and still is, a general feeling that the serviceman has some sort of blanket protection in the Soldiers' and Sailors' Civil Relief Act of 1940, and is thereby placed in a position of advantage so far as his contractual and other legal relationships are concerned.

All-Navy Cartoon Contest
Cartoon by Dwinell, USN

"Would you repeat the last part of that message, Mr. Jones . . . . . Mr. Jones?"

The act does provide certain protection for persons entering the service in regard to obligations incurred before entry. It defines the tax liabilities for persons in the service. It protects him against a default judgment when he, because of his service, is unable to protect himself. It does not provide that an otherwise valid lease may be broken if a serviceman receives transfer orders. As a practical matter, the career serviceman is affected very little in his day-to-day life by the Soldiers' and Sailors' Civil Relief Act, except for the taxation aspects.

• ***The serviceman as a citizen of his community.***

This isn't actually legal advice, but as a practical matter, being a community-minded citizen enters into the subject of the "dual status" of the serviceman. It is not only legal but proper that you retain your ties in your home city or state and that you claim exemption from local taxation because you are a citizen of another state.

This does not mean, however, that you have to consider yourself an outsider in the community where you live. Persons who attend a local church, belong to the PTA, enter into local activities, take an interest in local happenings, familiarize themselves with local feelings and traditions just don't seem to get involved in as many problems. If they do get involved, they seem to be able to work them out more easily. Friends can be a big help in letting you know some of the local ground rules. They can recommend good places to shop and reputable business firms while at the same time cautioning you about others.

The suggestions outlined here are not new, nor will they prevent legal entanglements, even if followed to the letter. Some individuals may not even agree with them. It's interesting to note that the failure to follow some of these basic principles, however, is the direct or indirect cause of about 90 per cent of the average serviceman's legal complications.

Certain GI Policy Holders Can Convert To New Term Insurance at Lower Rates

If you are one of the 500,000 GI insurance policy holders who have the letters "RS" before your policy number, you can save up to two-thirds of your present premium costs.

You can do this just by exchanging your present *five-year term policy* for a *new term policy*. Since the new ones carry the same face value, you lose nothing.

The new policies cannot be renewed once you've passed your fiftieth birthday. They will have to be converted to a permanent plan before then if you wish to continue protection beyond that date. But in all other respects, they carry the same protection as the present policies.

The conversion restriction is considered to be in your best interest in order to avoid the heavy increases in renewal term rates in later life.

There are also several plans of permanent insurance to which present holders of term policies can convert immediately. Of course, the premiums for permanent plans, while they never increase, are in a higher bracket than term insurance. Even if you feel that you can't stand the expense that goes with the conversion to one of the permanent type plans at this time, you can still save money by converting to one of the new low-cost term types. Both the present and the new term policies can be converted at any time, without physical examination, to a VA permanent-type plan.

You can get full information on this by contacting any VA office or by writing to the VA office to which premiums have been paid.

Change to Enlisted Rating Structure Affects SKs

There are two late changes to the enlisted rating structure. The first calls for the redesignation as a general rating of the general service rating of *Storekeeper* (SK), at all pay grades. The other disestablishes the emergency service ratings of *Storekeeper G* (General) and *Storekeeper T* (Technical) at all pay grades.

These changes were recommended by the Chief of Naval Personnel and approved by Secretary of the Navy.

Directives will be issued later as to when the actual changes will take place.

Naval Reserve personnel in the SKG and SKT emergency service ratings will be converted to the newly redesignated general rating of SK. Personnel in these ratings will be changed to the general rating by administrative action. Those studying for advancement in rating will continue to advance in their emergency service ratings until new training material and qualifications for advancement in rating have been prepared.

Ample notice will be given before the new examinations go into effect.

Latest List of Motion Pictures Scheduled for Distribution To Ships and Overseas Bases

The latest list of 16-mm feature movies available from the Navy Motion Picture Service, Bldg. 311, Naval Base, Brooklyn 1, N. Y., is published here for the convenience of ships and overseas bases. The title of each picture is followed by the program number.

Those in color are designated by (C) and those in wide-screen processes by (WS). Distribution began in March.

Gigi (1259) (C) (WS): Musical; Leslie Caron, Maurice Chevalier.

Harry Black and the Tiger (1260) (C) (WS): Drama; Stewart Granger, Barbara Rush.

Step Down to Terror (1261): Drama; Coleen Miller, Charles Drake.

The Silent Enemy (1262): War Drama; Laurence Harvey, Dawn Addams.

Mardi Gras (1263) (C) (WS): Musical; Pat Boone, Christine Carere.

Barbarian and the Geisha (1264) (C) (WS): Drama; John Wayne, Eiko Ando.

Houseboat (1265) (C): Comedy; Cary Grant, Sophia Loren.

Guns, Girls and Gangsters (1266): Crime Drama; Mamie Van Doren, Gerald Mohr.

The Perfect Furlough (1267) (C) (WS): Comedy; Tony Curtis, Janet Leigh.

The Big Country (1268) (C) (WS): Western; Gregory Peck, Jean Simmons.

Bell, Book and Candle (1269) (C): Comedy; James Stewart, Kim Novak.

From the Earth to the Moon (1270) (C): Science-Fiction; Joseph Cotten, George Sanders.

A Nice Little Bank That Should Be Robbed (1271) (C): Comedy; Tom Ewell, Mickey Rooney.

Two-Headed Spy (1272): Drama; Jack Hawkins, Gia Scala.

Senior Prom (1273): Musical; Jill Corey, Paul Hampton.

The 7th Voyage of Sinbad (1274) (C): Fantasy; Kerwin Mathews, Kathryn Grant.

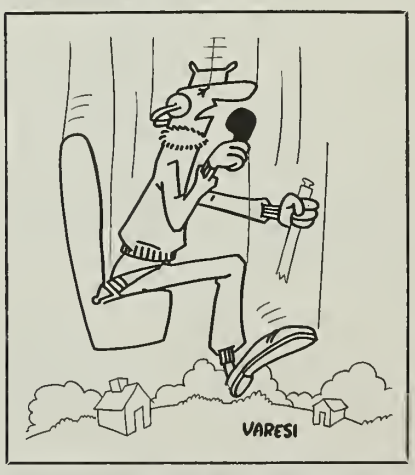
A Stranger in my Arms (1275) (WS): Drama; June Allyson, Jeff Chandler.

Escort West (1276) (WS): Western; Victor Mature, Elaine Stewart.

Home Before Dark (1277): Drama; Jean Simmons, Dan O'Herlihy.

The Last Blitzkreig (1278): War Drama; Van Johnson, Leon Askin.

All-Navy Cartoon Contest
Richard Varesi, ADAN, USN



"Pilot to crew! What was that explosion I just heard?"

More PO1s and CPOs Enter Select Group of Warrants

Nineteen first class and forty-six chief petty officers have been issued temporary appointments to Warrant Officer, W-1.

These appointments are from an eligibility list established by a selection board convened 4 Feb 1958.

Regular Navy appointments were broken down into the following designators: Boatswain (7132), five; Aviation Ordnance Technician (7212), three; Surface Ordnance Technician (7232), nine; Ordnance

Control Technician (7242), one; Machinist (7432), ten; Electrician (7542), eight; Aviation Electronics Technician (7612), two; Communication Technician (7642), two; Electronics Technician (7662), four; Ship Repair Technician (7742), six; Ship's Clerk (7822), five; Bandmaster (7852), one; Supply Clerk (7982), five; Medical Service Corps (8172), four; Photographer (8312), one; Civil Engineer (8492), two.

DIRECTIVES IN BRIEF

This listing is intended to serve only for general information and as an index of current Alnavs and NavActs as well as current BuPers Instructions, BuPers Notices, and SecNav Instructions that apply to most ships and stations. Many instructions and notices are not of general interest and hence will not be carried in this section. Since BuPers Notices are arranged according to their group number and have no consecutive number within the group, their date of issue is included also for identification purposes. Personnel interested in specific directives should consult Alnavs, NavActs, Instructions and Notices for complete details before taking action.

Alnavs apply to all Navy and Marine Corps commands: NavActs apply to all Navy commands; BuPers Instructions and Notices apply to all ships and stations.

Instructions

No. 1130.4F—Provides instructions for enlistment in the Regular Navy or release to inactive duty of certain Naval Reserve personnel serving on active duty.

No. 1301.32—Provides instructions concerning the new Officer Distribution Control Report (NavPers 2637).

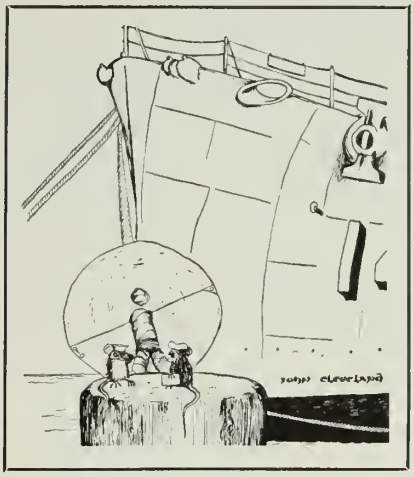
No. 1301.33—Discusses current procedures concerning the assignment and rotation of officers in the grades of LTJG and ENS in order to promote a better understanding with these officers.

No. 1510.63C—Provides quota information for enlisted service schools.

No. 1510.86—Presents procedures whereby qualified and recommended nonrated personnel from the operating forces may request assignment to certain class A schools.

No. 1416.1E—Sets forth a plan for the determination of professional fitness for promotion of officers by means of specified courses of instruction.

All-Navy Cartoon Contest
J. W. Cleveland, YN3 (SS), USN



"Permission to come aboard, Sir!"

No. 1440.18B — Announces Change No. 1 to BuPers Inst. 1440.18B which is concerned with the program for adjustment of the enlisted rating structure through formal school training and in-service training.

No. 1500.25E — Announces Change No. 1 to BuPers Inst. 1500.25E which is concerned with the convening dates for classes at training activities and certain schools of other services under the management of the Chief of Naval Personnel for the calendar year 1959.

No. 1531.1A—Provides information about the USAFI courses that will prove helpful to naval personnel who wish to review for the preliminary examination for assignment to the U. S. Naval Preparatory School.

No. 1900.2B—Clarifies and brings up to date instructions for the preparation and distribution of the Armed Forces of the United States Report of Transfer or Discharge (DD Form 214, Rev 1 Nov 1955).

No. 1910.11C — Discusses the early separation of certain enlisted personnel serving on active duty.

All-Navy Cartoon Contest
B. L. Peeples, AMC, USN

"You guys got to shape up for this inspection!"

Notices

No. 1520 (11 February)—Invited applications from Supply Corps officers for assignment to the Freight Transportation and Traffic Management Course, Oakland, Calif., for calendar year 1960.

No. 1760 (16 February)—Provides additional information to that contained in NavPers 15855C "Going Back to Civilian Life."

No. 4650 (16 February) — Announced Change No. 1 to BuPers Inst. 4650.9, which is concerned with transportation and accommodations of military personnel and their dependents when traveling via commercial, government, or private transportation within, to, from, or outside the continental United States at government expense.

No. 1020 (25 February)—Provided information concerning the wearing of metal shirt collar devices by chief petty officers.

No. 1220 (27 February)—Clarified instructions concerning personnel accounting entries of Navy Enlisted Classification (NEC) codes.

No. 5512 (3 March)—Prescribed the identification cards to be issued to members of the U. S. Navy and Naval Reserve.

No. 1020 (6 March)—Announced that change to *Navy Uniform Regulations* which is concerned with the optional wearing of dinner dress blue jacket uniform by flag officers and captains.

No. 1111 (12 March) — Announced the preliminary selection list of enlisted candidates for the NROTC.

No. 3590 (13 March)—Established procedures for the conduct of district, Fleet and U. S. Navy rifle and pistol competitions in 1959, and for the U. S. Navy participation in the 1959 national matches.

Roundup on Fishing Licenses for the Navy Fresh Water Angler

FOR THE BENEFIT of Navy fishing enthusiasts, here's a state-by-state rundown on license requirements and fees, as well as the address of the fish and game headquarters for each State.

Information pertaining to open and closed seasons, limits and other matters is not included here, as it usually varies from season to season and differs considerably according to types of fish and even according to areas within individual states. Therefore, it is suggested that you write to the address listed under the state you're interested in, for a copy of current regulations about that particular location.

The following license requirements apply to fresh water fishing only. *No license is required for fishing in salt or tidewaters* except along the coast of California.

Alabama—If you are stationed in, or are a resident of Alabama who is stationed elsewhere, you may purchase a resident license. Otherwise, you must purchase a non-resident license. An annual fishing license for residents costs $1.00. Non-residents may purchase a seven-day license for $2.00 or an annual one for $5.00. Write to: Chief, Division of Game and Fish, Department of Conservation, Montgomery, Alabama.

Alaska—Fish and Game laws for the 49th State are at present being revised. However, the laws administered by the Department of Interior Fish and Wildlife Service will remain in effect until the new state regulations relating to game and fur animals, birds and game fishes are enacted and put into effect. Under present regulations, a game fishing license costs $1.00 for residents and $2.50 for non-residents. Write to: Director, Fish and Wildlife Service, Juneau, Alaska.

Arizona—Military personnel stationed in Arizona may procure fishing licenses for the same price as residents of the state. A warm water fishing license costs $1.50, trout fishing $2.50, or a combination for both warm water and trout fishing $3.50. Write to: Director, Arizona Game and Fish Department, Phoenix, Arizona.

Arkansas—If you are stationed in, or are a resident of Arkansas stationed elsewhere, you may purchase a resident license. If you are not in either of those categories you must obtain a non-resident license. A resident license costs $2.50. Non-residents may purchase a 10-day license for $2.00 or an annual one for $5.00. Write to: Director, Game and Fish Commission, Game and Fish Bldg., Little Rock, Arkansas.

California—All servicemen on active duty are regarded as resident citizens of California for license purposes. A resident's sport fishing license is $3.00, while non-residents may purchase a 10-day license for $3.00 or an annual sport fishing license for $10. Write to: Director, Department of Fish and Game, 722 Capitol Ave., Sacramento 14, California.

All-Navy Cartoon Contest
J. E. Linneball, YN3, USN

"At last . . . shore duty."

Colorado—If you are stationed in Colorado you qualify for a resident fishing license. Military personnel who are not stationed in Colorado, but who entered the service from that state, retain their residence privileges. Resident fishing licenses cost $4.00, while a non-resident must pay $3.50 for a five-day permit or $10 for a regular annual license. Write to: Director, Game and Fish Commission, Denver, Colorado.

Connecticut—Active duty military personnel may procure a combination license to hunt and fish in Connecticut for a fee of $4.35. When applying for and using such license, you should carry your ID card or other credentials indicating full-time membership in the armed forces of the U.S. A three-day non-resident license is available for $1.85. A regular non-resident license costs $6.35. Write to: Superintendent, Board of Fisheries and Game, 2 Wethersfield, Hartford, Conn.

Delaware—If you are stationed in Delaware you may purchase a resident fishing license for $1.25; for non-residents it's $7.50. Write to: Board of Game and Fish Commissioners, Dover, Delaware.

Florida—Military personnel stationed in Florida are considered residents of that state and may obtain a 14-day resident fishing license for $2.00. A license is not required of residents to fish non-commercially with three poles or less in the county in which they reside. The fee for a non-resident license is $3.25. Write to: Director, Game and Fresh Water Fish Commission, Tallahassee, Florida.

Georgia—If you are stationed in Georgia you may purchase a resident license, but if stationed outside of the state and you are not a legal resident of Georgia, you are required to purchase a non-resident license. The resident license is $1.25, while non-residents must pay $1.00 for a one-day permit and $3.25 for a 10-day license. Write to: Chairman, State Game and Fish Commission, 401 State Capitol, Atlanta, Georgia.

Hawaii—Fishing in the 50th state is done mainly in the ocean, along the coast, reefs and harbors. No license is required for ocean fishing. Fresh water fishing is restricted to a limited number of small lakes and ponds that have been stocked with largemouth bass, bluegills and sunfish; and a few of the cold mountain streams that have been stocked with rainbow trout. You need a license for fresh water fishing in the Hawaiian Islands. Write to: Division of Fish and Game, Board of Commissioners for Agriculture and Forestry, P.O. Box 5425, Pawaa Sub-station, Honolulu 1, Oahu, Hawaii.

Idaho—Military personnel on duty in Idaho are permitted to purchase a resident fishing license for $2.50. Dependents of military personnel are required to reside in the state for at least six months before becoming eligible for resident licenses. A non-resident must pay $4.00 for a five-day permit and $12.00 for an annual license. Write to: Director Idaho Fish and Game Commission, 518 Front St., Boise, Idaho.

Illinois—If you are serving on active duty within the state of Illinois you shall be considered a resident of the state during your tour of military duty, and you may fish with a resident license that costs $2.00. Non-residents may purchase a 10-day permit for $2.00 or an annual license for $4.00. Write to: Director, Department of Conservation, State Office Building, 400 South Spring St., Springfield, Illinois.

Indiana—Military personnel hold the same status as civilians, and a residency of six months is required to obtain a resident license. A combination hunting and fishing license for residents is $2.50, while a woman resident fishing license is $1.50. Non-resident fees are $16.00 for a combination license; $3.50 for an annual fishing license; and $2.50 for a 14-day permit. A trout stamp ($2.00) is also required, in addition to the regular fishing license, for trout fishing in the state of Indiana. Write to: Director, Division of Game and Fish, Department of Conservation, Indianapolis, Indiana.

Iowa—Military personnel do not need a license to fish in Iowa. This ruling,

however, may be amended at any time by the state's Attorney General. In the event that such a decision is made, a resident license is $2.00; while the fee for a non-resident is $3.00. Write to: Director, Iowa Conservation Commission, East Seventh and Court, Des Moines, Iowa.

Kansas—If you are stationed in Kansas you are entitled to purchase a resident license which costs $2.00. The fee for a non-resident license is the same as that charged a non-resident by the state in which the applicant resides, but in no case less than $3.00. Write to: Forestry, Fish and Game Commission, Pratt, Kansas.

Kentucky—Military personnel on active duty, stationed in Kentucky, may purchase a resident fishing license for $3.25. Non-resident licenses are $2.50 for a 10-day permit and $5.00 for an annual one. Write to: Commissioner, Department of Fish and Wildlife Resources, Frankfort, Kentucky.

Louisiana—No license required for members of the armed forces. Write to: Director, Louisiana Wild Life and Fisheries Commission, 126 Civil Courts Bldg., New Orleans 16, Louisiana.

Maine—Military personnel stationed at bases in Maine, and their dependents, may purchase a resident fishing license for $2.25, or a combination hunting and fishing license for $4.25. Non-resident fishing licenses cost: $3.25 for three days; $4.75 for 15 days; and $7.75 for a year. Write to: Commissioner, Department of Inland Fisheries and Game, Augusta, Maine.

Maryland—You must reside in the state for six months before being eligible to purchase a resident fishing license for $3.00. A non-resident license good for a year, is $10.00. A three-day permit is $3.00. Write to: Director, Game and Inland Fish Commission, 516 Munsey Bldg., Baltimore 2, Maryland.

Massachusetts—If you are assigned to duty in the state of Massachusetts you can qualify for a resident license which costs $3.25 for men and $2.25 for women, or you may purchase a combination hunting and fishing license for $4.25. Non-residents must pay $7.75 for fishing or $20.25 for a combination license. Write to: Director, Division of Fisheries and Game, 73 Tremont St., Boston 8, Massachusetts.

Michigan—All members of the armed forces on active duty and stationed in Michigan are eligible to procure resident licenses. If you are a resident of Michigan at the time of entry into the armed forces, you may purchase a resident license as long as you remain on active duty, even though assigned outside the state. Fees for a resident license are $2.00, and a trout stamp is $2.00 extra. For non-residents the trout stamp is also $2.00, and there's a 15-day permit for $4.00; and an annual license for $5.00. Write to: Director, Department of Conservation, Lansing 26, Michigan.

Minnesota—If you are stationed in Minnesota you are permitted to apply for a resident license provided you have proof that you are stationed in the state. If you are a resident of Minnesota, but stationed outside of the state, and return to Minnesota on leave, you do not need a license other than your leave papers. Military personnel who are not residents of Minnesota and not stationed in the state must buy a non-resident license. Minnesota offers a combination fishing license for man and wife for $2.00, or a single license for $1.50. A non-resident license costs $4.00. Write to: Division of Game and Fish, 337 State Office Bldg., St. Paul 1, Minnesota.

Mississippi—All provisions of the Fish and Game Laws for Mississippi apply to military personnel and civilians alike.

NOW HERE'S THIS

Busy as a DD

There's a good chance this year will seem pretty tame to USS Forest Sherman (DD 931) after all that happened to her in 1958.

Last July the ship was ordered to join the Sixth Fleet for a normal four-month cruise in the Mediterranean. By the time the cruise was over she had seen service with the Sixth Fleet during the Lebanon crisis, been detached to the Seventh Fleet when trouble broke out in the Taiwan area, visited such "normal" Med cruise ports of call as Subic Bay, P. I., and Yokosuka, Japan, transited both the Suez and Panama canals and steamed clear around the world.

She had also furnished Edmund S. Perry, BT1, the material for a nice little quip.

When asked if any of the crew had made it to Tokyo while the ship was in Japan Perry told an interviewer: "No. But maybe we will next time we're in the Med."

Missouri—If you are stationed in and residing in Missouri you will be considered a "resident" of that state for the purpose of purchasing a fishing permit. Residents of Missouri who are in the armed forces and stationed in another state, may also obtain resident permits. If you are neither a resident of Missouri nor stationed in that state, you must obtain a non-resident permit for $5.00. A resident license is $2.00. Write to: Director, Missouri Conservation Commission, Farm Bureau Building, Jefferson City, Missouri.

Montana—If you are assigned to duty in Montana you may, after a period of 30 days of residence within that state, and upon presentation of proper papers from your CO, apply for a resident license which costs $3.00. Non-residents must pay $3.00 for a six-day permit and $10 for an annual one. Write to: Department of Fish and Game, State Capitol, Helena, Montana.

Nebraska—If you have been stationed in Nebraska for 90 days or more you may purchase a resident license ($2.00). For non-residents it's $10.00 for an annual license or $3.00 for a 10-day permit. Write to: Director and Chief Conservation Officer, Game, Forestation and Parks Commission, State Capitol, Lincoln 9, Nebraska.

Nevada—Military personnel stationed in Nevada may obtain the same fishing license as the bona fide residents of that state. Applications, however, must be made through your CO. If Nevada is your home, and you are stationed outside of that state, you may obtain a free fishing license for use when home on leave. A license costs $5.00 for residents and $10.00 for non-residents. Write to: Director, Fish and Game Commission, 51 Grove St., Reno, Nevada.

New Hampshire—If you are stationed within the state, you and your dependents are eligible to purchase a fishing license at the same fee as is charged a legal resident of the state. Military personnel who are guests of residents of the state are also eligible to purchase a fishing license at the same fee as is charged a legal resident of New Hampshire. A resident license costs $2.50. Residents of the state who are on regular active duty with any branch of the armed forces, and who were legal residents of New Hampshire before entry into the armed forces, may make application to the director of the fish and

game department for a free license. Non-residents must pay $7.25 for an annual license; $2.75 for a three-day permit; and $4.25 for a 15-day permit. Write to: Director, Fish and Game Department, 34 Bridge St., Concord, New Hampshire.

New Jersey—A resident of New Jersey who is on active military service may fish without a license in that state. Active duty military personnel who are non-residents of that state may obtain a resident license for $3.15. A trout stamp is $1.00 extra. Non-residents must pay $5.50, and $5.00 extra for the trout stamp. Write to: Director, Division of Fish and Game, Department of Conservation and Economic Development, 230 West State St., Trenton 25, N. J.

New Mexico—If you are on duty in the state of New Mexico you may obtain a resident fishing license upon certification by your CO. The fee for a resident license is $3.50, while a non-resident must pay $8.00, or else procure a five-day permit for $3.00. Write to: State Game Warden, Department of Fish and Game, Santa Fe, New Mexico.

New York—If you are on active duty, regardless of where you're stationed or where you reside, and possess leave papers or service identification, you may fish in New York state without a license. Write to: Commissioner, Conservation Department, Division of Fish and Game, Albany 1, N. Y.

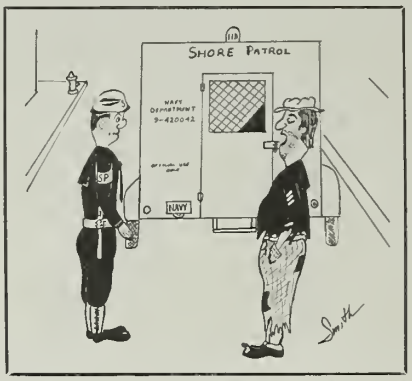
North Carolina—Military personnel stationed in North Carolina may purchase a resident license without regard to residence requirements. A state-wide resident license is $4.10, while non-residents must pay $6.10. A county license is available to residents for $1.10. Write to: Executive Director, North Carolina Wildlife Resources Commission, P.O. Box 2919, Raleigh, North Carolina.

North Dakota—If you are on active duty you must be stationed in North Dakota for at least six months before you are eligible to purchase a resident license. The fee for a resident license is $1.00, while non-residents must pay $3.00 write to: Commissioner, State Game and Fish Department, Bismarck, North Dakota.

Ohio—All active duty personnel, regardless of where stationed or legal residence, are permitted to fish in Ohio without a license, provided they have proper identification. Write to: Chief, Division of Wildlife, Department of Natural Resources, 1500 Dublin Road, Columbus 12, Ohio.

Oklahoma—If you are stationed in Oklahoma you will be allowed to purchase a resident fishing license after you have been continuously residing in that state for 60 days or more. Citizens

All-Navy Cartoon Contest
J. H. Smith, YN2, USN



"I am not out of uniform, I happen to be the station bum dope artist!"

of Oklahoma who are serving in the armed forces outside of the state are exempt from license requirements when on authorized leave. A resident license is $2.00, while a non-resident must pay $5.00 a year, or $2.25 for a 10-day permit. Write to: Director, Department of Wildlife Conservation, 118 State Capitol Bldg., Oklahoma City 5, Oklahoma.

Oregon—If you are on active duty in the armed forces you are entitled to purchase a resident license for $4.00. A non-resident must pay $15.00 a year, or $5.00 for a seven-day permit. Write to: Director, State Game Commission, 1634 S.W. Alder St., Portland 8, Oregon.

Pennsylvania—You must be a resident of the Commonwealth of Pennsylvania for a period of 60 days before you are eligible to puchase a $3.25 resident license. The fee for non-residents is $3.25 for a five-day permit. Write to: Executive Director, Pennsylvania Fish Commission, South Office Building, Harrisburg, Pennsylvania.

Rhode Island—Military personnel may purchase resident licenses regardless of place of station. Members of the armed

All-Navy Cartoon Contest
D. D. Awalt, MM3, USN

"Good shot Wilson, but that was one of our ships."

forces who are residents of Rhode Island may continue to fish and hunt with a license obtained before entering the service until up to six months after discharge. A resident license costs $3.25, while non-residents must pay $7.25 for a year, or $3.25 for a three-day permit. Write to: Chief, Division of Fish and Game, Department of Agriculture and Conservation, 83 Park St., Providence 2, Rhode Island.

South Carolina—If you are stationed in South Carolina you are considered to be a resident of that state so long as you are stationed there, and are eligible for a resident license. Military personnel not stationed in South Carolina, resident or non-resident, are entitled to fish without a license upon presentation of leave papers. A resident county license is $1.10, while a statewide license is $3.10. Non-residents must pay $10.25 for a statewide license. In addition, a special fishing permit, which costs $1.10, is required on certain lakes. Write to: Director, Division of Game, Wildlife Resources Department, Columbia, South Carolina.

South Dakota—When stationed in South Dakota, you must reside in that state for six months before you can apply for a resident license. Military personnel stationed outside of the state must purchase non-resident licenses. Bona-fide residents of South Dakota who are in the armed forces may purchase a resident license when home on leave. The fee is $2.00 for residents and $5.00 for non-residents. A three-day non-resident permit costs $1.00. Write to: Director, Department of Game, Fish and Parks, State Office Building, Pierre, South Dakota.

Tennessee—Military personnel stationed in Tennessee, regardless of their legal domicile, may purchase a resident fishing license. If you are not stationed in that state you may fish in Tennessee without a license while on leave, provided you have leave papers in your possession. The fee for a resident fishing license is fifty cents, while non-residents must pay $1.50 for a three-day permit or $2.00 for a 10-day permit. An annual non-resident license is the same as the fee charged in the non-resident's home state, but not less than $5.00. A trout stamp is $1.00 extra. Write to: Director, Game and Fish Commission, Cordell Hull Building, Nashville 3, Tenn.

Texas—If you are assigned to duty in Texas you are accepted as a resident of that state and may purchase a fishing license for $2.15. Write to: Executive Secretary, Game and Fish Commission, Austin, Texas.

Utah—If stationed in Utah you can purchase a resident fiishing license for $3.50. A non-resident license is $10.00

a year and a five-day permit is $4.00. Write to: Director, Department of Fish and Game, 1596 W. North Temple, Salt Lake City 16, Utah.

Vermont—If you are stationed in Vermont you are permitted to obtain a resident license upon presentation of a certificate from your CO stating that fact. A resident fishing license is $1.75 and a combination hunting and fishing license is $3.50. Non-residents may purchase a three-day permit for $2.00; a 14-day permit for $3.50, or an annual one for $5.25. Write to: Director, Fish and Game Service, Montpelier, Vermont.

Virginia—If stationed in Virginia you may procure a resident license. A county license for residents is $1.00; a statewide license is $3.00. In addition, you must pay $1.00 each for National Forest and trout stamps. A non-resident license is $10.00 a year, and a three-day permit may be purchased for $1.50. Write to: Executive Director, Commission of Game and Inland Fisheries, 7 No. Second St., Richmond, Va.

Washington—Military personnel assigned to duty at an installation in the state are permitted to purchase resident licenses. A resident county license is $3.00, while the fee for a state license is $4.50. Write to: Director, Department of Game, 509 Fairview Ave., North, Seattle 9, Washington.

West Virginia—If you are a resident of West Virginia on active duty in the armed forces, you are permitted to fish in the state without a license while on leave. You must, however, have leave papers in your possession while fishing. Most other military personnel, whether stationed in West Virginia or not, are required to obtain a non-resident license. To be eligible for a resident license you must live in the state for one year and register to vote. A non-resident license is $10.15, while residents are required to pay only $2.15. In addition, you are required to purchase a National Forest Stamp for $1.00. Write to: Director, Conservation Commission, New State Office Building, Charleston, West Virginia.

Wisconsin—If you either entered the service from Wisconsin, or are stationed in that state, you will be issued a fishing licenes free of charge. A non-resident license is $5.00, or a joint man-and-wife license is available for $6.00. Write to: Director, Conservation Department, State Office Bldg., Madison, Wisconsin.

Wyoming—Military personnel, and civilians, must reside in the state for 35 days before becoming eligible for resident licenses. A resident license is $1.50 a year, while non-residents must pay $10. Wyoming also offers a special 10-day military permit for $3.00. Write to: Commissioner, Game and Fish Commission, Cheyenne, Wyoming.

SIDELINE STRATEGY

BLUEJACKETS at Memphis who are hunting and fishing enthusiasts are fortunate to have in their midst an able and competent adviser. He's Vern Snowden, JOC, USN, who writes "Fishing Lines," a weekly column in the *Bluejacket*, the station newspaper that serves the various NATTC activities in the Volunteer State.

Snowden is a sportsman and conservationist who speaks with authority. Many of his columns are firsthand accounts of his hunting and fishing ventures that one would expect to find in the nation's leading newspapers or sporting magazines instead of a station paper.

His informative yarns and tales are exceptionally well written in the every-day language that every outdoorsman understands. Not only does he reveal his own techniques and experiences but he also spotlights many other colorful personalities in the widespread Navy sporting scene. Here's a condensed version of one of his typical columns:

In these parts where tackle boxes grow "plug ugly" from too many fishing lures, a one-bait angler is about as rare as a pork chop at a fish fry. At NAS Memphis that one-lure fisherman is John Wall, AT1, of AT "A" School. Although Wall is actually a part-time plug-maker and has some 300 lures for sale, he only uses one of them to catch most of his fish.

"All the others are for the fishermen," he quips. He figures he's culled 1000 plugs to find his choice—the "C. P. Swing." The "Dalton Special," a surface plug, is his second best preference. The soundness of his choice is perhaps best proved by what he caught with the versatile "C.P. Swing" in just one trip: buffalo, drum, gar, bass, bream, crappie, catfish and striped bass.

As Wall makes lures in his home workshop, it looks easy: a couple of quick strokes with a wire bender, a bead or two, a spinner blade and a hook and he has another new one. "There's nothing to it," he claims, but trying to duplicate his motions is like rolling a cigarette with one hand.

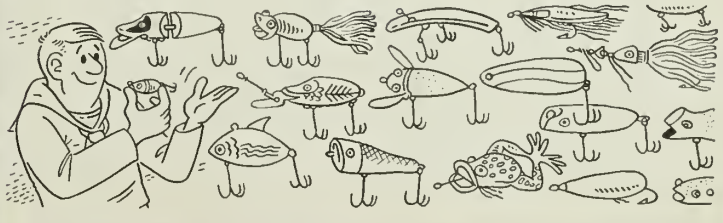
Wall not only makes lures while you wait, he also assails you with fishing chit chat the like of which is bound to raise your fishing fever. He'll tell you what they're hitting and where and when to go.

Having caught and eaten about every kind of fish, both salt and fresh water "models," Wall has become an authority on this tricky bit of outsmarting the big ones. His secret is "lure action"—the way anglers make plugs "work." He also swears by the little personal touches with which he modifies all his lures. He doctors 'em all, indiscriminately.

"I've yet to find a plug I can't improve on," he says. Even his "Daltons" are "fixed" with heavier hooks so they'll sit up higher. He prefers yellow paint jobs for his lures, but he's caught fish from Alaska to Florida on everything from jar lids to can openers.

That's real sportsmen's talk.

—HGB, JOC.



DECORATIONS & CITATIONS

"For exceptionally meritorious service to the Government of the United States in a duty of great responsibility . . ."

★ FLATLEY, James H. Jr., Vice Admiral, USN (posthumously), as officer in Charge, U. S. Naval Aviation Safety Activity and later, Commander U. S. Naval Air Bases, Fifth Naval District. A strong advocate of aviation safety, VADM Flatley developed a sound aviation training program. In July 1956, he moved to the office of the Chief Of Naval Operations as Head, Special Weapons Plans Branch, Strategic Plans Division; and, in October 1957, became Director, Air Warfare Division. He displayed broad capability and sound judgment in planning, coordinating and directing the development of improved aviation weapons systems, thus assuring greater readiness of naval combatant forces.

"For exceptionally meritorious conduct in the performance of outstanding service to the Government of the United States . . ."

★ HOOVER, George W., CDR., USN, while serving at the Office of Naval Research, Washington, D.C., from 20 Jun 1952 to 31 Dec 1958. As Manager, Weapons Systems, Air Branch, Commander Hoover initiated and sponsored research on projects which have resulted in outstanding contributions to the Navy's operational capabilities, scientific advancement and national prestige. Commander Hoover's further realization of the utility of this concept to all man-machine systems has resulted in application of the same techniques to the control problems of submarines and surface ships. Through his driving spirit, organizing ability, imagination and foresight, Commander Hoover was personally responsible for the initiation of Project Orbiter, a joint Army-Navy effort to place an earth satellite in orbit, which later led to the development of Explorer I, the United States' first successful satellite.

★ NOVOSAD, Charles L. Jr., LT, USN, as Base Medical Officer and Flight Surgeon, attached to the Mobile Air Facility, McMurdo Sound, Antarctica, from 21 Jan to 16 Nov 1957. Exercising sound judgment, keen foresight, and unusual professional ability, Lieutenant Novosad was highly successful in carrying out his responsibilities throughout this period. On 12 Jul 1957, when a helicopter crashed and burned on the ice near the base, resulting in the instanteous death of one man and critical injuries to two others, Lieutenant Novosad was directly responsible for saving the lives of the two seriously injured men, rendering immediate, diligent, and constant care until they were evacuated on 3 Oct 1957.

★ PINK, William E., YNC, USN, while serving with the NROTC Unit at Pennsylvania State University from June 1953 to February 1957, and with the Training Division of the Bureau of Naval Personnel at Washington, D.C., from February 1957 to August 1958. In addition to his primary duties, Chief Yeoman Pink conducted a paperwork simplification program, originated and prepared a 287-page office procedures manual based upon a detailed job analysis of every administrative procedure required at an NROTC Unit. In June 1956, he volunteered to establish and carry out a critically needed program of paperwork simplification and standardization for all fifty-three NROTC units. He completed the program in the Bureau, personally preparing and illustrating the 'NROTC Office Procedures Manual,' a concise and clear cut work which will save the Navy time and money.

"For heroic conduct not involving actual conflict with an enemy . . ."

★ CULLITY, William M., ABC, USN, for heroic conduct while serving at the United States Naval Air Facility, McMurdo Sound, Antarctica, on 14 Mar 1958. Upon discovering that *YOG 70* had broken loose from her moorings and was adrift 150 yards offshore in a heavy sea, Cullity, along with a shipmate, immediately lowered a 13-foot plywood recreation skiff into the rough, icy sea and paddled against a strong tide to the vessel, pulling 200 yards of manila line behind the skiff. After boarding the vessel, he assisted in making fast the line, well aware that if the line parted he would be adrift at sea in an uncontrollable vessel loaded with 250,000 gallons of aviation fuel, and with no possibility of outside assistance. With the manila line, he aided in hauling in a wire rope attached to a D-8 tractor ashore, thus insuring the safe return of *YOG 70* to her moorings.

★ FLANAGAN John L. P., DMC, USN, for heroic conduct while serving as a diver, attached to USS *Greenlet* (ASR 10), during the attempted salvage operations on USS *Stickleback* (SS 415) in rough waters south of Oahu, T. H., on 29 May 1958. Although *Stickleback* was constantly in danger of sinking without warning, Flanagan voluntarily entered the buoyancy tank and the number one main ballast tank with salvage air hoses and assisted in securing these hoses. Persisting in his efforts to salvage the ship until seriously injured by the heavy wave action, he was subsequently removed from the submarine.

★ MAHER Eugene H., Captain, USN, for heroic conduct while serving as Commander, Antarctica, on 28 Feb 1958. When a scientist fell seventy feet from a sheer ice barrier into frigid waters near Little America V, Captain Maher, by his own direction, was lowered over the barrier into a rubber liferaft and, in company with a second scientist, rowed to overtake the imperiled scientist, who had managed to climb onto a floating iceberg. After transferring the victim to the raft, Captain Maher rendered as much aid as possible until a lone rescue helicopter lifted all three men to safety approximately two hours after the accident. By his prompt and courageous actions in the face of grave hazards, Captain Maher was directly instrumental in savings a man's life.

★ WALL, Sidney R., FA, USN, (posthumously) for heroism while serving on board USS *Franklin D. Roosevelt* (CVA 42) on 19 Jun 1957. Following a main steam casualty in boiler room IC where he was on duty, Wall voluntarily remained in the space to assist the boiler tender in securing the boiler, thereby preventing further material and personnel casualty. Collapsing on the deck of the boiler room after completing his task, Wall, by his self-sacrificing efforts and inspiring devotion to duty, upheld the highest tradition of the United States Naval Service.

BOOKS

LOTS OF TERRITORY COVERED IN THIS MONTH'S SELECTIONS

BOOKS SELECTED for review this month range from Civil War fiction through World War II history and commentary, to the North Pole crossing by *Nautilus*. These are only a few of the newly published volumes purchased and which are being sent to many shipboard libraries and Navy and Marine Corps general libraries ashore. Ask for them.

Nautilus 90 North, by CDR William R. Anderson, USN, with Clay Blair, is, perhaps, of most immediate interest to Navymen. This is the story, told by the skipper of *Nautilus,* of the first atomic submarine's voyage from the Pacific to the Atlantic beneath the Arctic ice pack and under the North Pole.

CDR Anderson tells of life aboard the sub on the trip, of the narrow escapes, of the special problems of navigation that had to be overcome, Special instruments had to be installed in secrecy, a cover plan devised to keep the entire trip hidden until it was accomplished. The actual crossing is described in considerable detail.

The Soviet Navy, edited by CDR M. G. Saunders, RN, is a symposium by 18 contributors from 11 different countries, which presents a disturbing picture of the increasing power of the Soviet navy. In 10 years, it has grown to a position second only to that of the United States. Its size, composition and disposal are drawn from official sources and discussed by experts in their respective fields. The preponderance of long-range submarines—and their significance—is fully weighed. Gives any Navyman something to think about.

Another volume which may give you something to think about is a study issued by the Twentieth Century Fund, ***Arms and the State,*** by Walter Millis with Harvey C. Mansfield and Harold Stein. Here, the point is made that the former clear separation of civil and military elements which formed U. S. policy has broken down as a result of two world wars and the development of modern weapons. The last 10 years have been marked by various and, at times, painful efforts to give form to the new arrangements but they still do not work too well. Part of an over-all study, this first volume comprises an introduction by Mr. Stein, three chapters summarizing developments from 1931 to 1945 by Harvey C. Mansfield and the remaining six chapters by Walter Millis on the issues and experience of the years since the end of the war.

Two books — ***Leyte,*** by Samuel Eliot Morison and ***The Divine Wind*** by Rikihei Inoguchi and Tadashi Nakajima with Roger Pineau—comprise this month's World War II selections.

In *Leyte,* the 12th volume of the History of United States Naval Operations in World War II, RADM Morison, USNR (Ret.), tells of a closing phase of the war. The Battle for Leyte Gulf was not only a great naval battle but also an exceedingly controversial engagement. This account by RADM Morison makes the full story available to the public for the first time.

Professional interest aside, *Leyte* is quite a story: Three separate Japanese fleets were to attack American naval and landing forces in Leyte Gulf. One was demolished by Halsey's Third Fleet; another was wiped out by the Seventh Fleet in what may have been the last battle line engagement in naval history; the third, although it was lucky enough to surprise a group of American escort carriers off Samar, suffered "grave" damage. Quite a story, worthy of a C. S. Forester—or a Morison.

Divine Wind is another in a series of books published by the U. S. Naval Institute which describes one specific aspect of the war as seen by our opponents. In this instance, Japan's kamikaze force is the subject. Inoguchi and Nakajima, both intimately connected with the suicide corps, have collaborated with Roger Pineau, a U. S. State Department expert, to explain the psychology which enabled some 4000 Japanese pilots to crash-dive their planes deliberately into American ships. (Their score was frighteningly good: 34 ships sunk and 288 damaged, including 36 aircraft carriers, 15 battleships and 87 destroyers.) Kamikaze tactics and training are also described.

A mystery which has puzzled seamen for some time concerns the events which immediately preceded the crash of *Andrea Doria* and *Stockholm* in the North Atlantic nearly three years ago. In ***Collision Course,*** by Alvin Moscow, that problem is answered as completely as it probably ever will be. To prepare himself for the actual book, Mr. Moscow covered the hearings on the crash for the Associated Press, sifted through some 6000 pages of testimony and journeyed throughout Europe interviewing all the key figures involved. In writing a magnificent analysis of the accident and sinking, the author is scrupulously fair to both sides, yet never wishy-washy. In doing so, he also rather convincingly disposes of the possibility that has been suggested of a third ship being unknowingly involved in the tragedy.

Seek Out and Destroy by James D. Horan, is our fiction selection this month. *Seek Out* is a fictionalized account of *Shenandoah,* the Confederate raider which played havoc with Union shipping during the Civil War. Written in the typical blood-and-thunder swashbuckling style of the historical novel, *Lee* (as *Shenandoah* is called here) captures scads of vessels, takes prizes and prisoners on every ocean, destroys the Union *Kearney* sent to sink her, and destroys the entire Union whaling fleet in Alaskan waters. By a strange coincidence, there's a beautiful heroine involved, too.

Another item of fiction available is ***The Mission,*** by Dean Brelis. The scene is Burma during World War II, and it concerns a young American sergeant and his opposite number, an equally young Kachin tribesman. They fight the Japanese and learn not to fight each other. It sounds simple but the story has quite a kick to it. It's an interesting account.

On Ships and Aircraft

The seventh edition of ***Ships and Aircraft of the U.S. Fleet*** is now available. A compact and informative unofficial publication covering the Navy, it is compiled and published by James C. Fahey.

It lists all U.S. Navy ships and aircraft now in use, and has artists' conceptions and information about some that are not yet ready for use.

The book has been selected by the Bureau's Library Services Branch for distribution to ships and stations.

THE NAVY'S ROLE IN MATS

A SAMPLE OF ARMED FORCES TEAMWORK

The story of the Military Air Transport Service, better known to most servicemen and their families as MATS, exemplifies top teamwork and the fine results it gets.

"The needs for both of these Services (Military Air Transport Service and Military Sea Transport Service) are acknowledged, but they are complementary rather than comparative. Airlift is rapid and flexible whereas sealift is massive; MATS can perform tasks which MSTS cannot do, and vice versa."—House Committee on Armed Services, Special Subcommittee No. 4-1958.

IT WAS DECEMBER 1942. Navy war planners were painfully aware of the enormity of courses and distances among the hundreds of island footholds from California to Japan. It was obvious that the Fleet would require massive support from sea transport. But there would be times when the difference between victory and defeat would depend on the ability to get there first with the most. There would be times when the rapid supply of forces and extension of sea lanes would win battles.

Thus, because air transport is the quickest way to move supplies, the Naval Air Transport Service was born.

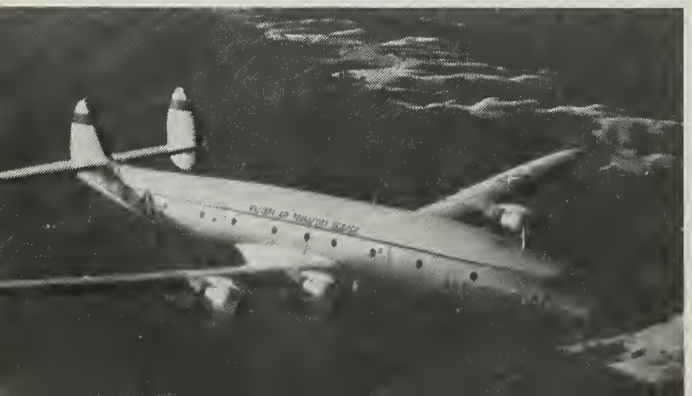
This was NATS, decommissioned 1 Jun 1948 when it was merged with the Air Transport Command (ATC) of the Air Force to form the joint Military Air Transport Service (MATS).

MATS today not only provides the Navy with considerable air transportation but the Navy has transport squadrons operating as a part of MATS. The best way to get acquainted with Navy MATS in peacetime is to get transferred—not necessarily to MATS—anywhere overseas. Overseas air transportation of military personnel and their dependents has for years been a MATS specialty.

Let's assume you have received orders directing you to report to Port Lyautey, French Morocco. Next in importance to selling your house and car and drawing a dead horse, your primary interest will lie in the matter of transportation. The answer is simple. You are directed to travel by air and are to report to Passenger Service at VR-22, NAS Norfolk.

YOU FIND that VR-22 operates R6D cargo/passenger transports from Norfolk to Port Lyautey on sched-

TEAMWORK—MATS is a joint Navy-Air Force operation. Here, an Air Force transport makes a routine flight.



uled runs and, as "medium" transports, can carry approximately 68 passengers. What about your wife and children? Will there be room for them? If housing is available, you will find yourself traveling concurrently with the whole gang in airline style.

However, MATS will not carry the dog, nor will it be responsible for your parakeet, goldfish or turtle. These will either have to stay at home or find some other way of transportation. With a more-or-less adequate explanation to the youngsters concerning the fate of Hero and with some misgivings in regard to your furniture, you board your plane.

On the plane, you find a box lunch, a blanket and pillow at your seat. In flight, the flight attendant provides hot coffee and soup. After he warms the bottle for baby, you begin to see your way clear to a little nap. You tilt back the foam rubber seat and let the drone of the four engines do the rest. Meanwhile, the older boy eases up to check the cockpit and make sure the navigator is competent, and knows his position.

He is and does. This particular navigator has been making the same trip for some two years and knows every ocean intersection, mail buoy and rock en route.

Eight hours later a large rock looms up ahead in the dark, rain and overcast. You land on it. So far as you are concerned, Lajes AFB in the Azores exists for one reason only—to provide you with a hot meal, refuel your plane and send you on your way to Lyautey, which is one box lunch, one blanket and one pillow away. If you happen to land during the day at Lajes (which is rare) you would notice the warm climate; the quantities of MATS transports, Strategic Air Command refuelers; and MATS Air Rescue Service aircraft lining the runway.

CROSSROADS—Sign post at MATS stop on Midway illustrates extensive area covered by the air service.

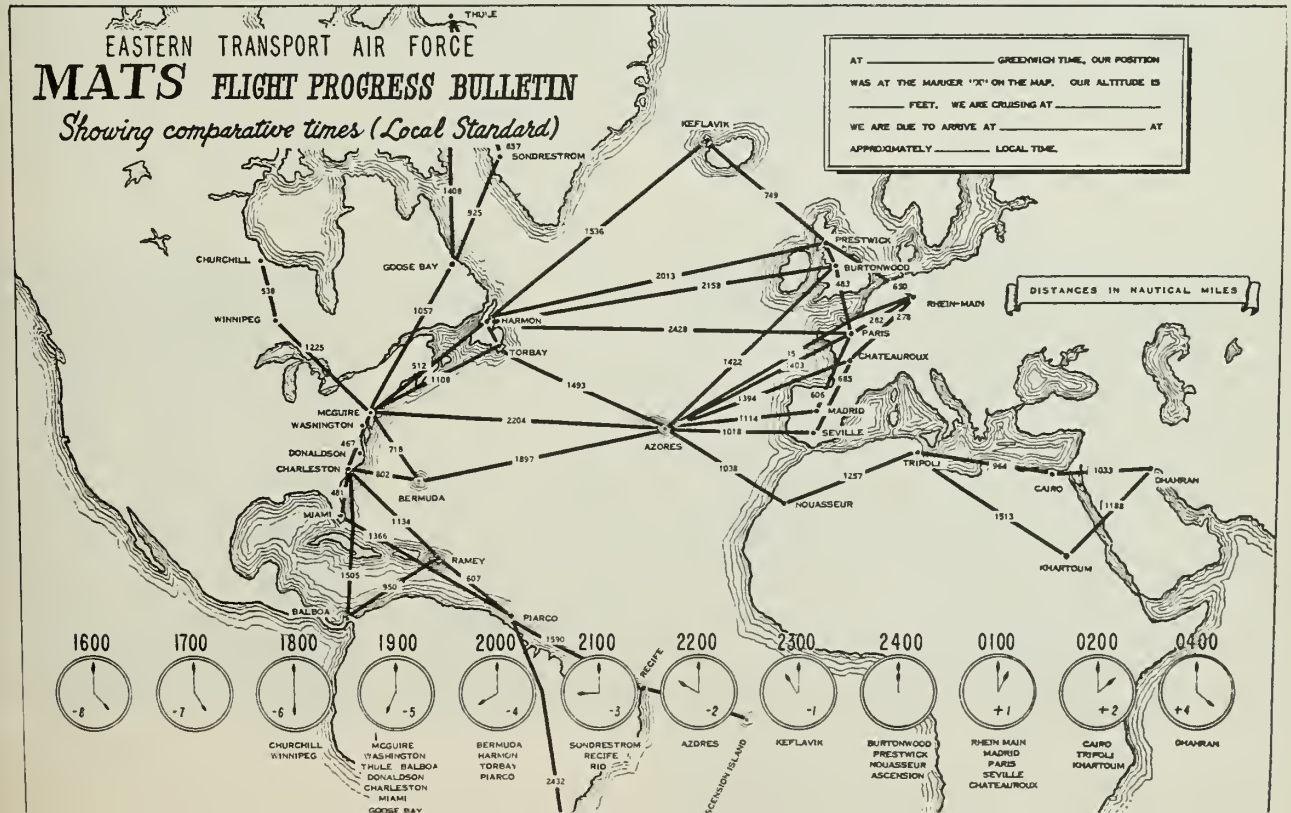
Lajes is a Portuguese possession operated jointly with the USAF. An Air Force general officer is in charge. You will see any number of Portuguese going about their chores but, chances are, you won't see the General. He will be busy running what, at times, is the biggest—night-and-day—Air Base in the world.

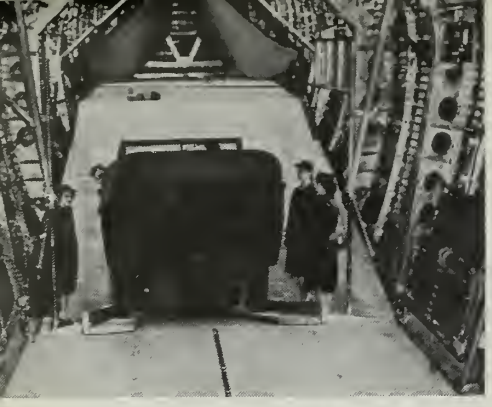
The hills enveloping the base always look the same, patches of green vegetation on a background of red earth which your daughter swears is just like Munchkin Land in Oz. A good enough description for a place where nothing changes and nothing happens. If you are ever stranded there on a Sunday, you may wander down to the bull ring and watch a matador playing tag with a bull for part of the afternoon. That's about all. You're happy to blast off for Lyautey.

THIS TRIP, which is only a sample of many going off in all directions, occupied the better part of a day and gave you a birds-eye view of one MATS function. You've had less than a glimpse of the whole MATS global air network, which operates from bases in the United States, and flies through bases in Japan, Honolulu, Alaska, Newfoundland, Europe, Libya, Dhahran in the Persian Gulf, and elsewhere.

Naval aviation is represented in MATS by two Naval Air Transport Wings:

MATS NETWORK — Chart shows MATS flight routes from the east coast of U. S. to points across the Atlantic.





NATS—Navy's wartime airline delivered the goods around the world including such spots as Rio and Pt. Barrow.

• The Pacific Wing based at Moffett Field, Calif., consisting of VR-7 and VR-8 (maintenance).

• The Atlantic Wing at McGuire AFB, N. J., consisting of VR-3 and VR-6 (maintenance), as well as VR-22 at Norfolk.

• In addition, VR-7 maintains a four-plane detachment at NAS Atsugi, Japan. Navy MATS operates about 12 per cent of the 600 four-engine transports comprising the MATS Strategic Transport Force which flies 115,000 miles of air routes linking bases in some 20 countries.

Overseeing the Navy's contribution to MATS is Captain Carl E. Giese, USN, former commanding officer of USS *Antietam*, with headquarters at Scott AFB, Ill. Navy MATS East Coast squadrons are supervised by Captain Michael G. O'Conner, USN, Commander Naval Air Transport Wing, Atlantic. Maintaining a parallel command on the west coast, Captain Samuel Randall, USN, Commander Naval Air Transport Wing, Pacific, supervises the two squadrons at NAS Moffett Field.

East Coast squadrons fly the R6D *Liftmaster* while, on the West Coast, squadron personnel fly the R7V *Super Constellation*.

The mission of the squadrons is simple: "Provide military air transportation service for personnel and material of the armed forces to include air transportation of sick and wounded."

This Navy MATS mission should not be confused with that of the Navy Fleet Tactical Support Squadrons, VR-1 at Patuxent, Md., VR-21 in Hawaii, VR-23 in Japan, and VR-24, Port Lyautey. TACSUPRONS are primarily light transports assigned to Fleet commanders.

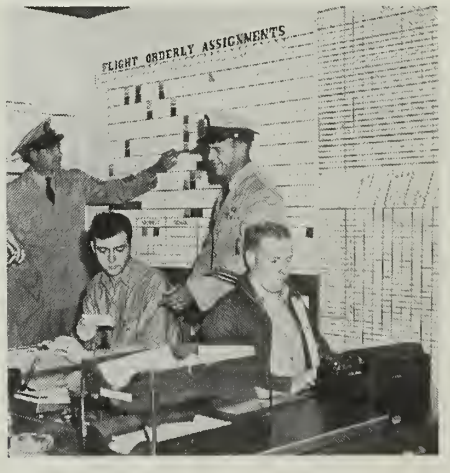
THE OLD-TIMERS of World War II who are students of ancient naval aviation history can tell you endless sea stories concerning carrier warfare and heroes. It doesn't take long before some of the squadrons mentioned earlier—VR-1, VR-2, VR-3 and so forth up to VR-13—will be discussed. This was a force which did not exist at the beginning of the war and, at the end, consisted of 500 transport aircraft and some 25,000 Navymen.

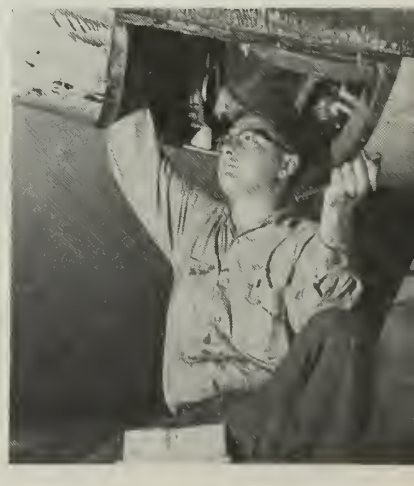
The R4D—alias the DC3, the *Dakota* and the *Gooney Bird*—the small twin-engine ancestor of a distinguished line of transports, became the nucleus of NATS. VR-1 at Norfolk became the first Naval Air Transport Service squadron in 1942. It consisted of four DC3 aircraft. VR-2 was then formed at Alameda, Calif., and VR-3 became operational at Olathe, Kan. Within two years, NATS exploded into a 500-plane force serving the U. S. Fleets in every world theater. New squadrons were formed, from VR-4 through VR-13 and new aircraft acquired. The four-engine R4D (DC4) *Skymaster* became the basic landplane, complemented by the aquatic *Mariner* and *Coronado*. These planes made a reputation thru the years.

Esprit-de-corps grew with every island hop from Guadalcanal to Tokyo. NATS provided air logistic support for almost every important World War II campaign.

You've heard the old story, "For want of a nail, the shoe was lost. For want of a shoe, the horse was lost . . . " NATS was designed to move the *nail* after surface transport had moved the horse but, at times, it also moved the *horse*. Flame-throwers were airlifted to the

PILOTS, PLANNING, REPAIRS—Pilots check out plane. *Center:* Flights are planned. *Rt:* Ground crewman makes repairs.





Marines at Tarawa. Boiler tubes were flown to disabled destroyers. Aircraft tires were flown to sustain fighter operations at Guadalcanal. On occasion, where sheer tonnage of heavy material was urgently needed, NATS plugged the gap in the surface supply pipeline. At Okinawa, 90 tons of shells were delivered rush rush.

However, medical supplies were the highest priority cargo. Thousands of gallons of whole blood and plasma were flown to forward medical facilities.

Perishables, new weapons, replacement parts and priority mail, plus innumerable last-minute essentials, were the stock in trade of NATS. At times, it was difficult to distinguish the unusual from the routine. In one instance VR-5, based at Seattle, airlifted 65 tons of equipment and 60 men to establish a Fleet Weather Station at Khabarovsk in the USSR. Just a routine job.

"For outstanding heroism in support of military operations during the Okinawa campaign from 1 April to 21 Jun 1945. Operating with new crews and, during the first phase of this period, without benefit of adequate logistic support or navigational aids, VRE-1 evacuated over 9600 casualties despite extremely foul weather conditions." So read the citation given by Secretary of the Navy James Forrestal to all hands of VRE-1, the first NATS evacuation squadron.

Five years later, operating as a part of MATS, former NATS squadrons participated in the evacuation of more than 17,000 Korean conflict casualties. Air evacuation of the wounded has become a standard procedure during the Korean affair. Ninety per cent of our casualties were airlifted to hospital areas. The World War II four per cent death rate from wounds was cut in half. At the same time, hospital ships were released for close support operations where they were needed the most.

THE AVERAGE NAVY AIRCRAFT COMMANDER today has logged more than 6000 flight hours. He is likely to be a Naval Reservist with 10 to 15 years of transport experience. Some pilots are assigned to MATS squadrons directly from flight training or from non-transport aviation activities. But if you have the impression that hot fighter pilots who report aboard for VR duty read the handbook today and fly passengers tomorrow, rest assured it isn't true. Former single-engine aviators transferred to VR usually spend a minimum of one and one-half years before they make their first flight as aircraft commander.

Perhaps your orders to Lyautey are modified to report to a staff in Germany. In that case, you'll go to McGuire AFB for transportation. Suppose you have a few hours' wait before departure. You wander out of the Terminal to the VR-6 ramp. Day or night you find them busy with the maintenance of their 26 R6D aircraft.

The entire base lives, breathes and preaches flight safety. The walls of the quarterdeck and ready room, and all the bulletin boards, are covered with flight safety posters. There are monthly basewide safety meetings for all crew members, featuring a brass band and a guest speaker on the subject. Attendance is required. There are local and basewide safety poster and slogan contests (a good artist or poet can turn a fast buck here any day). Why all this? Because of the basic air transport philosophy which recognizes the value of a human life.

The heart of the program is sound maintenance and training practice. For this reason, training and flight procedures have become quite rigid. If a prospective aircraft commander is found to be weak in one minor point, he is assigned several hours of retraining flight

MERCY FLIGHTS—Ambulances line up to transfer patients to MATS airplanes for flight back to stateside hospitals.

HAY THERE—Navy R5D MATS transport plane drops load of hay to cattle and sheep that were starving.

BERLIN AIRLIFT—Navy aircraft working with MATS unload in Berlin. *Below:* Plane-load of coal is secured.

BEING PREPARED—Navy airmen check over their survival gear while serving at NAS Moffett Field, Calif.

time. Aircraft commanders who have flown for years often find themselves in the same boat after undergoing their six-month flight check. The same high standards apply to co-pilots, navigators, flight mechanics, radiomen and flight attendants. They are all periodically checked on flights.

In the field of learning there are the Bachelor's, Master's and Doctorate degrees. In the MATS system, pilots may be designated on the monthly roster as 2P, 1P, AC, IAC or PFE. These aviation degrees range through second pilot, first pilot, aircraft commander, and instructor aircraft commander, to pilot flight examiner.

The latter designation is conferred on only a few of the oldtimers who are considered outstanding aviators. The system is necessarily based on skill rather than military rank although, in effect, the squadron chief pilot and flight examiners may be said to have supreme rank and final decision in matters of flight safety.

HERE'S HOW a normal flight works: Within three days, the eight crew members and one aircraft will transport either 70 passengers or about 20,000 pounds of cargo to one or more MATS airports in Europe, and return approximately the same amount of passengers or cargo to the United States.

The plane returns in about 48 hours. The plane will spend about 35 hours in the air and about 13 on the ground being reserviced and off-loaded. The crew will spend about 44 hours preparing flight plans, studying take-off and landing procedures, absorbing navigational and weather information and also flying their plane. They will spend about 16 hours eating or resting. At any time during the trip the aircraft and crew must be prepared to be recalled, diverted to other routes or reloaded with other passengers or cargo and, upon return, both aircraft and crew must be ready to repeat the same performance.

Meanwhile, other MATS planes and crews are going through the same procedures on a slightly different schedule, 24 hours a day, 365 days a year.

ALTHOUGH NOT A SPECIALTY in the Navy, transport aviation can claim some of the most highly professional personnel in the naval establishment.

LCDR Allen G. "Blackie" Gilmore, at present serving with VR-3, is a typical aircraft commander. Blackie entered pre-flight schol in October 1942, finished flight training at Corpus Christi, Tex., and instructed there until early in 1945. His career thereafter was essentially a roster of naval aviation transport, and included VR-11 Hawaii, VRE-1 Guam, VR-6 Guam, VR-4 Moffett Field, VR-32 (Ferry) San Diego, VR-44 (Pilot Training) Moffett, VR-8 Hawaii, MATS Headquarters, Washington, D. C., and VR-3 McGuire. He received the Navy Unit Commendation for combat duty with VRE-1 during World War II, is a member of the 10,000-Hour Club, and is now a flight examiner with VR-3. A former three-letter man, he's still available for any sports activity in his squadron and is an expert in shooting the breeze. He is the personification of naval air transport history.

However, the one man who is capable of impressing characters such as Blackie is still "Jumping Joe" Clifton.

RADM Joseph Clifton, USN, now chief of Naval Air Advanced Training, already had quite a reputation when he took command of VR-8 in June 1949 two months before Blackie reported aboard. He had started his rolling-stone career as an All-America fullback for the Naval Academy some 25 years ago and hit—perhaps—his maximum velocity as CO of Air Group Twelve in World War II. He still sets a fast pace at 50, having just qualified in a jet aboard a carrier. The then Captain Clifton was CO of VR-8 the last month of the Berlin airlift after which he returned to Hawaii with VR-8 to conduct peacetime operations in the Pacific—peaceful but never boring.

After the first month or so of his tenure of office, Captain Clifton was known to any base support activity as "Joe," and if you were to answer the phone and hear "This is Joe" over the wire, you knew: (1) Captain Clifton was calling, and (2) prompt action was going to be required about something.

Among other items, he managed to acquire extraordinary quantities of personnel, notwithstanding the then austere peacetime squadron allowance. Any Navy flier who passed through the islands or who otherwise had nothing to do, found himself in VR-8 on either temporary or permanent assignment. There were few complaints from those so shanghaied.

Jumping Joe was not satisfied with mere personal leadership. His ambition reached to some kind of a trademark which would stamp every VR-8 transport as a member of a unique organization.

He achieved what he wanted. Once a critical remark filtered into the front office: "Joe Clifton is so mickey mouse fat on personnel and runs such a plush outfit that all he needs now is white sidewalls on his aircraft." That was just what Joe was looking for. He got the VR-8 Maintenance Officer on the phone.

"This is Joe. I want white sidewall tires on all squadron aircraft."

"What the hell? . . . Who is this?" said Maintenance.

"The Commanding Officer."

"Oh. I thought you said white sidewall tires for aircraft, Captain. I guess I didn't hear what you said."

"I said I want white sidewall tires on all aircraft."

"But sir! They don't make white sidewalls, and besides, it's against . . ."

"I've got problems of my own. Don't bother me with yours," said jumping Joe, and hung up.

Shortly thereafter, VR-8 transports became noted, not only for the fine polish of their hulls, but also for their impeccable white sidewalls.

It paid off in more ways than one. One night, a VR-8 transport had landing gear trouble which required a

low pass by the tower for a "gear down" check. The tower operator, squinting through the darkness and rain could see nothing but a white circle passing the tower along the flight path. "Gear is down," he announced. "Cleared to land."

Next day, Joe Clifton had the pleasure of advising his critics of a new safety measure designed to avoid nighttime wheels-up landings.

ROUTINE CARGO, passenger and training flights make up a good part of the VR squadrons' daily work—the kind of jobs that do not make headlines. For example:

An hour before MATS flight P232 was due to leave Atsugi, Japan, for the West Coast, a sailor from the seaplane tender USS *Orca* (AVP 49) reported to a MATS Air Traffic Coordinating Office with emergency leave orders in hand. In less than 36 hours, he was by his wife's bedside at a hospital in San Francisco.

A carrier operating in the Med radioed AIRLANT for immediate shipment of urgently needed parts to repair its catapult. Within 12 hours, a regularly scheduled MATS R6D had parts aboard when it left NAS Norfolk.

To indicate priority, before any passenger carried on MATS aircraft can be accepted for air travel, he must have an air movement designator assigned by Air Traffic Coordinating Offices (ATCO) located at all MATS terminals. At Dover AFB, Delaware, for example, the Navy ATCO is represented by a civilian and a U. S. Navy Chief Storekeeper. These men are responsible for the lift of cargo consigned to units of the Sixth Fleet, units working on special projects in the Arctic and the Atlantic areas, and units engaged in Fleet maneuvers and other activities.

The Dover ATCO has routed countless naval personnel and material through the base to world-wide trouble areas. Dover also provided support of the underwater demolition units who blasted open the frozen harbor at Thule, Greenland. Men and material connected with satellite monitoring from the U. S. Naval Observatory and the Office of Naval Research are routed through the base to stations throughout the Western Hemisphere. Dover ATCO is also busy in the support of the naval buildup in Spain, including the construction of shipyards and docks, material depots and piers, contracted by the Navy.

The West Coast *Super-Connies* fly MATS' most glamorous route—the "Embassy Run." This haul, designed to serve U. S. embassies and other government departments across southern Asia, runs from Travis AFB, Calif., to Hawaii and Japan, then south and west across the Philippines, Viet-Nam, Thailand, India and Pakistan, to its turn-around in Saudi Arabia. Crew members who work this run find themselves in parts of the world they never dreamed of seeing when they shipped over.

MATS was just 24 days old when it was asked to help break the blockade of Berlin with the now-famous airlift. During this period, two Navy squadrons —VR-6 and VR-8—achieved spectacular flight records. VR-8 led all squadrons in every phase of air transport operation, aircraft utilization, total cargo carried, payload efficiency and tons per plane.

At the same time, VR-6 flew 60 missions in one day from Frankfort to Berlin. A busy day's work.

Long training in the use of GCA radar-directed approaches in MATS paid off in the difficult Berlin winter weather. Forty minutes out of Fulda, aircraft reported to Tempelhof for letdown and landing. Because maintenance of proper airspeed was so important in the tightly meshed schedule, Air Force control planes often flew formation with the airlift R5Ds to insure proper calibration of airspeed indicators.

The blockade was broken 1 Aug 1949 after the combined airlift task force, and Navy Air Force, had flown 2,230,000 tons of supplies into Berlin. Following the Berlin airlift, MATS had just settled down to business when another airlift was started—this time in Korea. Here again, MATS accumulated startling statistics.

Aerial evacuation proved to be an outstanding morale factor, since every man knew that if his wounds made it necessary, he was no more than 70 hours from hospital care in the United States. (That time has been further reduced at present.)

WHY SHOULD THE armed services take it upon themselves to operate what has been called (incorrectly) "The largest airline in the world?"

That query can best be answered by analogy. Suppose the ship's communications officer, harassed by long hours under a heavy load of messages, were to go to the skipper and say: "We're sending too many personal messages which, in peacetime, could go by mail. Furthermore, higher precedence than deserved is assigned to most outgoing traffic."

If the commanding officer cut down on the burden of messages and waited until he arrived in port to mail routine communications, he would ease the load. Before long, he would need fewer radiomen and fewer radios. Next year his allowance would be cut and so would his capacity. If all COs did this, the Navy would save money.

Fine. But what about readiness? An emergency situation arises and you have no communications.

MATS is a rapid means of communication, to communicate essential war material, troops and other combat personnel through airborne pipelines. Most peacetime operations of MATS, such as the transportation of dependents, are not often of an urgent nature. But if the capability and training in airlift is cut down today, it won't be there tomorrow.

Next time the Navy accommodates you with a lift on a modern MATS transport, bear in mind that the same aircraft, stripped for air evacuation in combat, may someday do you another personal favor.

—LCDR R. A. Swenson, USN

FAMILY AFFAIR—Luggage is inspected while en route from Hawaii to California by Military Air Transport.

TAFFRAIL TALK

MANY OF OUR more discerning readers, who can immediately detect a misplaced comma or hull number, will undoubtedly note considerable emphasis on Special Services, sports and recreation in this issue. That's just fine because, not long ago we happened to look over the shoulder of CDR K. B. Hysong, Director of Special Services, as he was preparing a speech. What he had to say seemed to sum up Special Services so well that we've taken the liberty of cribbing a little. This is it:

Not just anyone can do a good job in Special Services. An ensign or warrant officer who is interested in people and their welfare is far better qualified than more senior officers who have no such interests. And the Enlisted Recreation Committee can play an important role in the program.

A recent survey of recreation in one naval district revealed a need for broadening recreational opportunities—opportunities, not facilities. I am sure this is basically true throughout the Navy and is certainly true of the numerous stations I have visited in the last two years.

A good point for all of us to remember is that free time takes up much of a man's time and is bound to affect his attitude toward the military, to say nothing of the effect on reenlistment rates and administrative problems.

This same survey to which I referred showed that those who, in off-duty time, took part in activities requiring participation, took part in social activities, or took part in off-station activities compared to those who took part in on-base activities, had higher morale and fewer problems.

Here are some of the points we try to cover in planning a recreation program::

- Know whom we are trying to serve—how many, their ages, are they married or single.
- Determine, and periodically review, the kinds of recreation wanted. This is not easy, but we try to do it through questionnaires, a spot check in the barracks, through representatives of various units and divisions and, above all, through the Enlisted Recreation Committee.
- Be sure all hands know of the availability of recreational opportunities. You'd be surprised how few people aboard any station are informed on what's going on.
- Indoctrinate new men and women coming on board. Tell them what's available and, at the same time, ask what they're interested in. You might learn something new.
- Give proper balance to varsity and intramural programs. We try to encourage maximum participation in intramural sports. It doesn't make sense to spend $20,000 on a varsity program in which only a handful are actually engaged, and a few thousand for the rest of the base.
- We try to establish liaison with nearby community authorities in connection with off-station opportunities. Possibilities are unlimited—tours, dances, USO.
- Programs for dependents are a must. We're aware that the security and happiness of the family affects the over-all morale of the serviceman.

So what does this have to do with you?

Just this. There are a lot of intelligent, hardworking men throughout the Navy who are sincerely interested in your well-being and welfare. You never hear of most of them. But they're there, working. It could be pretty grim if they weren't.

The United States Navy

Guardian of Our Country

The United States Navy is responsible for maintaining control of the sea and is a ready force on watch at home and overseas, capable of strong action to preserve the peace or of instant offensive action to win in war.

It is upon the maintenance of this control that our country's glorious future depends. The United States Navy exists to make it so.

We Serve with Honor

Tradition, valor and victory are the Navy's heritage from the past. To these may be added dedication, discipline and vigilance as the watchwords of the present and future. At home or on distant stations, we serve with pride, confident in the respect of our country, our shipmates, and our families. Our responsibilities sober us; our adversities strengthen us.

Service to God and Country is our special privilege. We serve with honor.

The Future of the Navy

The Navy will always employ new weapons, new techniques and greater power to protect and defend the United States on the sea, under the sea, and in the air.

Now and in the future, control of the sea gives the United States her greatest advantage for the maintenance of peace and for victory in war. Mobility, surprise, dispersal and offensive power are the keynotes of the new Navy. The roots of the Navy lie in a strong belief in the future, in continued dedication to our tasks, and in reflection on our heritage from the past. Never have our opportunities and our responsibilities been greater.

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• AT RIGHT: IN THE SWIM—R. E. Johme, AM2, USN, receives Navy and Marine Corps Medal for his part in rescuing two drowning swimmers from heavy surf. Johme is attached to VA-112 at Miramar, NAS. Medal was presented by commanding officer, CDR. M. M. Casey.

FITNESS PLUS FUN

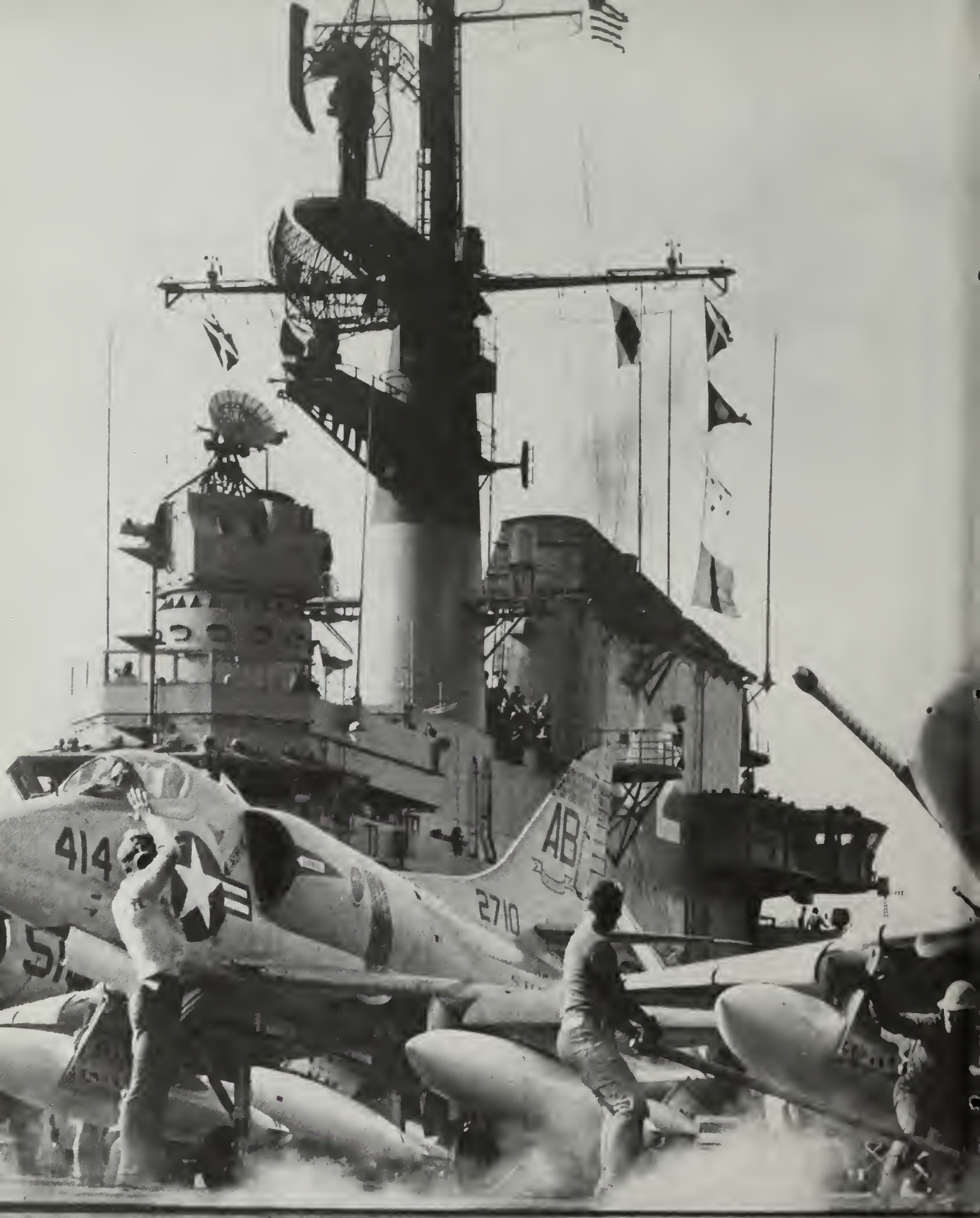
BETTER HEALTH GREATER SAFETY

ALL HANDS

in this issue
NAVY WINGS

This magazine is intended for 10 readers. All should see it as soon as possible. PASS THIS COPY ALONG

JUNE 1959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ALL HANDS

THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN

JUNE 1959 Nav-Pers-O NUMBER 509

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• **FRONT COVER: LOOKING BACK OVER** student pilot's shoulder, one gets this view of flight instructor in rear cockpit of a Navy training plane as he passes the word to an aspirant to the Navy wings of gold.

• **AT LEFT: CATMEN**—Fast action of catapult crews on the flight deck of *USS Fronklin D. Roosevelt* (CVA 41) sends jet pilots and planes roaring aloft during Fleet maneuvers.

• **CREDITS:** All photographs published in ALL HANDS are official Department of Defense Photos unless otherwise designated.

THE MAKING OF A NAVAL

That's what this issue is mainly about—the making of a Naval Aviator, and the men who help him to become airborne. In the sea-service today, aviation in some way or other plays a role in the life of every single Navyman.

A SQUADRON OF FOUR Navy planes wings its way toward Pensacola in parade formation. Below is the clear blue salt water of the Gulf of Mexico. Above the crystal clear blue heavens. Flying the planes are student naval aviators.

A few short months ago they had never seen the inside of a cockpit. Today they are confident. Yesterday they were scared.

It doesn't matter. The past is behind them, and they face the future. Today they are in the sky, flying the T-28 Navy propeller-driven trainer, a hotter job than most fighter planes the United States had during World War II. Nothing but "kiddie car" trainers, but they cruise at 170 knots.

The climb to the cockpit of this plane was difficult. Before any one of these four pilots was permitted merely to sit in the plane, he had spent many weeks on the ground in classrooms.

Classroom work is tedious, dull and hard work. It doesn't matter whether any one of the four was a *Naval Aviation Cadet* (NavCad), who had two years of college or its equivalent; an *Aviation Officer Candidate* (AOC), who was a college graduate; or an Officer Student (OI) —each came to Pensacola (for the same purpose) to learn how to fly a Navy airplane.

LET'S CONSIDER these men one at a time. The first obstacle that confronts every one of them is pre-flight training. For the NavCad and the AOC, it's 16 weeks of classroom work. The program calls for him to become a naval officer first, and a naval aviator second.

The officer student takes about the same course minus the officer indoctrination. He's already an officer. He spends "only" 10 weeks in pre-flight. His training is limited to actual pre-flight work.

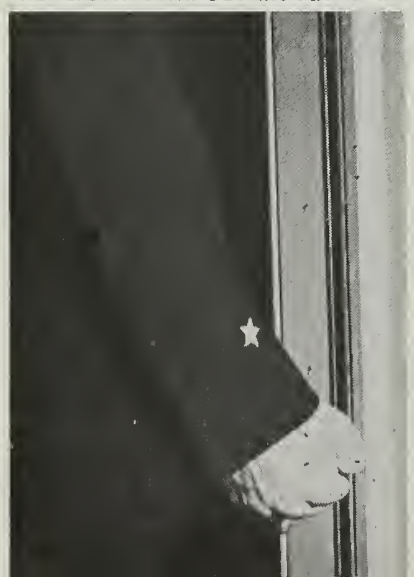
The military training of the NavCads and AOCs begins immediately —during indoctrination. This first week is spent in lectures, getting clothing, bracing, sounding off—and they are subjected to extra-strict discipline. Remember the discipline in "boot" camp? This is more of it—only more so.

"We were out of civilian clothes and into a new routine in a jiffy," recalled one cadet. "Although we had been issued our uniforms, they had to be tailored before we could wear them. In the meantime we wore 'poopy suits'." (A poopy suit is a coverall type suit similar to an exposure suit worn by pilots.) Like the boot camp recruit's "dirty" shirt, the pre-flight's poopy suit is designed to make you forget your fancy civilian clothes in a hurry.

AT THE END of the first week the men get their tailored uniforms. They fit fine, usually. Then comes the first inspection.

"I'll never forget it," said D. E. Squires, a NavCad from Mebane, N. C. "That inspecting officer looked liked the meanest man in the world. One of the new men forgot his name tag. The inspection officer passed down the long line of cadets and then stopped in front of him. He said, 'What are you doing out here? You're out of uniform. Get inside.' The guy almost died of fright. It's funny now

PRE-FLIGHT SYMBOLS include traditional knock and (rt) student's bookbag.



when you talk about it, but we were scared then."

But indoctrination week passes rapidly—after it's over. Then there's only 15 weeks left before you can get to that plane.

On the surface, pre-flight might not seem too hard; just 15 weeks to endure before the T-34 trainer becomes a reality. But pre-flight training is more complicated than just learning to fly one plane. You have to cram into that short time military doctrine, theory of flight, a smattering of physics, how an engine works, psychology, physiology, physical fitness—and how to shine your shoes.

ENS RODNEY KAUBER, USNR, an officer student from Johnstown, Ohio, confessed he had a civilian pilot's license before he came to Pensacola.

"At first I thought I had it made

AVIATOR

—easy. I knew the problems. But when I saw the training syllabus, I suspected how tough it would be. I wondered if I could make it."

It's no wonder. Here's what he read:

Basic Aviation Science—60 hours
Elementary Physiology—9 hours
Practical Aviation Physiology—10 hours
Engineering—31 hours
Naval Orientation—35 hours
Administrative Time—21 hours
Study—34 hours
Navigation—33 hours
Indoctrination—23 hours
Physical Fitness—50 hours
Survival—49 hours
Swimming—40 hours
Principles of Flight—30 hours
Study Skills and Recognition—25 hours

That makes a total of 450 hours.

ENS Lawrence H. Schlang, USN, from Cambria Heights, N. Y., a Naval Academy graduate, remarked that the biggest problem for many of the students is the math and physics (part of basic aviation science). "This part of it didn't bother me too much," he confessed. "We had a lot of it at the Academy."

Second LT Karl Kerstein, USMCR, had an engineering background. "That made the work easier for me. Some others just couldn't hack it."

Instructors emphasized, however, that although advance math courses are not essential, they are preferable. "We can take a man from eighth

UNIFORM OF THE DAY—Pre-flight cadet leaves store with load of new uniforms. *Below:* Formation of NavCads with book bags moves across campus.

AS THE CROW FLIES—Prospective aviators receive instructions in navigation. Here, they learn position of navigational stars to relative position on earth.

grade arithmetic and run him all the way through college calculus. If he doesn't have more than eighth grade arithmetic, however, he's going to have to dig."

PHYSICS IS THE OTHER hurdle that seems to catch a number of men half way over. It's no wonder. Consider the following course, and bear in mind that it is only 36 syllabus hours long:

Physical terms; force; motion; Newton's laws; gravity; work; power and energy; hydraulics; centrifugal force; friction and gyroscopic principles; heat; heat transmission; change of state; gas laws; Bernoulli's principle; sound; sound mach number; electromagnetic spectrum; atomic structure and electron theory; characteristics of static and dynamic electricity; Ohm's law; basic circuits; series and parallel circuits; magnetism; electromagnetism; electromagnetic induction; generators and motors; and basic principles of alternating current and transformers—36 hours, remember?

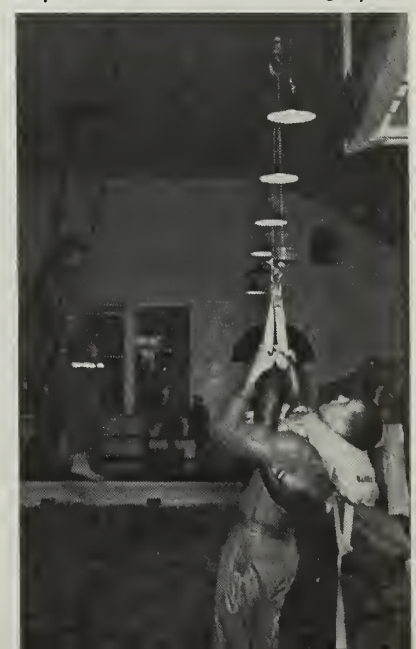
The course is tough and students put in long hours of study. Holding a tight rein on the men during their stay at pre-flight is Captain H. S. Jackson, USN, their commanding officer. He went through the training at Pensacola in 1940. Today he is sincerely interested in every student as an individual. "Although there are just too many for me to know personally, many do come to my attention for different reasons. I get a great feeling of accomplishment when I can help them.

"If a man is having trouble with his work I like to help him catch hold. If he is an outstanding student, I watch him develop. I have seen over 8000 men pass through pre-flight. Each week one group graduates and a new group comes in to take its place. We have about 800 students aboard at one time. I try to help each one make the grade."

TO MAKE THE GRADE is the ambition of every student. For one out of every three students, however, his ambition will not be realized. Only two-thirds of the men who enter pre-flight will wear Navy Wings of Gold.

Don't get the wrong idea. The Navy drops no one who is capable of finishing the training and who is sincerely interested in the program.

POOL JOB—Cadets familiarize themselves with emergency rescue techniques at sea in station's large pool.



If someone falls behind in his studies, he is given extra time and assistance. Only if there is no hope, or interest, is a man dropped from the program. LTJG Dick Newell of Pender, Neb., who is an AOC, advises, "Be ready to work for those wings. They're not going to give them to you."

Work is the secret, and for this, nearly every minute of the day is scheduled. It's not all in the classrooms, however. Fifty hours are spent on physical training. You always run to and from these classes. Then there's a little matter of running a 350-yard obstacle course. This consists of several hurdles, a maze, several six-foot by 14-foot bulkheads, water jumps, and a few more interesting obstacles.

In the gymnasium you work on the sidehorse, long horse, straddle vault, rope climb, and trampoline. This is, of course, in addition to the hours spent practicing dive rolls, head balance, handsprings and work on the horizontal bar. The rolls and dives are to help a man learn parachute landing techniques. These landings are practiced in the gym. A man, strapped in a parachute harness, swings from a ledge and rolls to a landing on the matted gym floor.

ANOTHER PHYSICAL TEST—and probably one of the most exhausting and best known—is the step-test. It's simple. You merely step from the floor to the top of a 20-inch high bench and then back to the floor. This is done 30 times per minute at a steady cadence. At the beginning of pre-flight you participate as long as you're able. At the end you must "step" for five minutes. Some time when you feel full of vim and vigor, have a go. You'll find out.

Another important part of physical training, and an important part of Navy life, is swimming. During these classes students learn to use the backstroke, breast stroke, side stroke, and the American crawl. They also swim with their clothes on.

The principle reason for swimming is for survival if forced down at sea. If a prop pilot has to ditch at sea, it is quite likely that he would ride the plane down. The problem then is to get out and away from the plane quickly and safely.

To simulate this, the Navy uses a Dilbert Dunker. This device, which

is mounted on an inclined track above the pool, is shaped like a cockpit. A student is strapped in as he would be in a plane—parachute, harness and all. The Dunker is then released. When it reaches the water it flips upside down. The student then has to unstrap himself and escape safe. Safety is stressed. If the instructor, who is under the water watching, thinks a student has not escaped properly, he is given a "thumbs down" and he must try again. The record is 14 tries before qualifying.

ALTHOUGH STUDENTS generally never get off the ground during pre-flight training, they do get their first trip into "space." First they learn how to use oxygen breathing equipment. Then they go inside a low pressure chamber and are taken to a simulated altitude of 30,000 feet. Jet trainees go to a simulated 43,000 feet.

At about 20,000 feet students are asked to remove their masks. During a 10-minute period they do simple tasks like playing patty-cake or placing cards in a slotted box. The effort needed to do such simple tasks has to be experienced to be fully understood. Students have a great respect for their oxygen supply after this live demonstration. A Navy corpsman is with the students at all time.

Meanwhile, back in the classrooms, students who are studying engineering learn the history and development of engines, principles of operation, lubrication and fuels for engines, ignition systems, propellers, superchargers, hydraulics, and test-stand trouble shooting.

A speed reading course is included in the "study skills" program. At the end of pre-flight a student must be able to read 600 words per minute, and comprehend 80 per cent of them.

Fifteen hours during pre-flight are spent in character education. Seventeen more in naval leadership and 110 hours in military indoctrination. This last includes drills, sword and staff movements, parades, and inspections. Other classes include organization of the Navy, and foundation of naval power.

IN SPITE OF the emphasis on safety, accidents will happen. Therefore, the job of the survival unit is to train men—just in case. Students get a thorough indoctrination of survival equipment and its uses before they ever leave the classrooms.

After the classroom indoctrination, students practice survival methods in a patch of woods on the Base. They learn how to care for themselves if they are forced down on land. Many of the basic tasks are those regularly taught to Boy Scouts.

NOT SO SIMPLE—Student flyers find that even game of 'patty-cake' becomes difficult when oxygen is cut during training session in pressure chamber.

Near the end of pre-flight training, students are turned loose in the woods—with instructors—with only the bare essentials. For three days they survive on their own. They use snares, make-shift shelters, and any number of techniques necessary to stay alive. When the students return to base, they have a great deal more respect for their instructor's advice.

This field trip in survival generally ends pre-flight. Looking back over the 16 weeks, the students remember a lot of hard work. Classes from 0700 to 1605; a two-hour study period every night during the week; reveille at 0515; and taps at 2130.

Liberties had been scarce. After indoctrination week they had been allowed one Sunday afternoon off, but they had to be back in the barracks by 2230. They couldn't leave the base.

After three weeks, however, they had been allowed a short liberty. For those who remained aboard, however, there had been the ACRAC club. Quite regularly the club had held dances with hostesses from Pensacola.

There hadn't been many liberties, but as they looked back, they realized that they had been allowed as many as study time would permit. Liberty takes time, and time was needed for study. Those gold wings are earned by work, not liberty.

Next stop, flight training at NAAS Saufley Field.

—Erwin Sharp, JO1, USN.

MIDNIGHT OIL—A lot of book learning has to be mastered in pre-flight training before naval aviation cadets get a chance at flying an airplane.

SHAPING UP—Exercises and gymnastics put pre-flight students in top shape and develop their physical coordination.

OVER THE HURDLES

YOU'VE SEEN the brief reference to the NavCad physical fitness program and survival training on page 4. But there's more to it than that. Here's a sample of what it's like:

Upon entering pre-flight, each student is given an entrance test designed to demonstrate his physical capabilities and to serve as a comparison to his outgoing test.

In the test, each cadet runs a speed agility course consisting of a six-foot bulkhead, low hurdles and several other obstacles. In addition, he is required to show his skill at the chinning bar, situps, jump reach and the step test.

When this test of endurance is completed, if the cadet's cumulative score is not within the standard minimum, he is placed on "Sub P. T." and must take the test every Saturday morning until he passes it.

After the incoming test, the next hazard the cadet faces is the obstacle course. This consists of 380 yards of bulkheads, rope climbs, mazes and hurdles to be completed in at least two minutes and 50 seconds. Each cadet runs the course three times while in pre-flight and is required to pass the time test at least twice. Two minutes rates a 4.0 in the book.

The next phase of the program is the gymnastics and trampoline training which gives a good indication of the cadet's coordination. Joe Lowder and B. A. Johnke serve as gymnastics coaches. Tumbling, rope climb, work on the low and high horse, parallel bars and trampoline fundamentals are some of the subjects covered. The trampoline is a favored means of workout as it is considered especially effective in training the cadet how to cope with unusual attitudes.

STEPPING OUT—Step-test is one of Pensacola's most exhausting exercises. At end of pre-flight training cadets must be able to 'step' for five minutes.

PARACHUTE TRAINING is also a part of the program. Cadets are taught, and have an opportunity to practice, different types of landings both on the ground and in the water by means of the jumping platforms and the parachute harnesses.

Amateur wrestling gives the cadet a chance to match his skill, coordination and strength against that of his classmates. The instructors demonstrate the various holds, take-downs and movements the cadets are expected to master. At the end of the course, each cadet is matched against a classmate, and must give an exhibition of wrestling. His score depends upon his mastery of the game.

Three periods of hand-to-hand combat are given. The cadet learns, among other things, how to escape

from choke holds and how to disarm an opponent.

At the end of the physical fitness course, the cadet runs the obstacle course for the last time and takes his outgoing test.

AS MENTIONED EARLIER, one further test — survival — must be passed before the student completes his pre-flight phase.

The survival course, given to officers and cadets, has a three-phase program which includes classroom instruction, field exercise and a three-day field trip to Eglin Reservation in which the students are required literally to live off the country.

The classroom phase, through lectures, demonstrations, first aid and visual aids, teaches the different kinds of survival and the problems involved.

Basic considerations for general health and welfare are keeping yourself, camp and equipment clean, purifying water; avoiding poisonous plants, insects and snakes, and the preservation of food.

It is the objective of the class to demonstrate the methods of improvising survival equipment by the use of natural materials, the parachute, and salvaged parts from the downed aircraft.

The students learn that one of the most useful pieces of equipment is the parachute. An overturned, inflated liferaft can be propped up and used as a lean-to. Or it can be used as a mattress if an overhead shelter is already available.

In addition to the classroom instruction, field exercises in the local woods are regularly carried out. Here, the student demonstrates his ability to build fires for warmth, cooking and signalling, constructs shelters, finds natural food and practices land navigation.

The class learns that there are five basic requirements that the survivor must fulfill before attempting to travel. These are: You must know where you are; you must have a means of setting and maintaining a course; must have physical stamina; must have suitable clothing and equipment; must have a source of food, fuel and shelter.

In addition to the various classroom and field exercises, the students are instructed on survival and travel in enemy territory, which they also practice during the three-day trip.

THE FIELD TRIP is the first step in the student's career toward formal survival training. It is a proving ground in which he can demonstrate and practice survival techniques.

A low, wooden structure with a sign on the front reading "U. S. Naval School, Pre-Flight Survival Unit" is the starting point of the trip. Here, the students are given their briefing before they begin their long, tough trek through the woods and swamps. They are given a description of the exercise, equipment to be used, and the basic ground rules.

Equipment issued each survivor includes a topographical map of the area, a machete kit, a sheath knife, an entrenching tool, emergency rations to last three days, and a sail needle. Three parachutes and one first aid kit is issued per nine students.

Divided into groups of nine men and an instructor, the students pull out for the first night's camp. Along the way they practice land navigation, basic survival, food procurement and first aid problems.

For safety purposes, the instructor carries with him a portable phone on which he makes hourly reports of the group's progress to the officer-in-charge of the trip.

At the first night's camp, traps and snares are set out to provide for the evening meal, fires are built and sleeping quarters are organized.

One of the strict rules of survival is to keep yourself clean, and to keep your equipment clean. In line with this, the students bathe and shave every night. The instructor inspects the camp, gives a critique of the day's work and briefs the students for the next day.

The second day the student practices cross-country travel by working out a triangular course that encompasses five miles. He travels this course by the use of a compass only.

The third day the instructor monitors a 15-mile hike while the students practice route finding, trail discipline and survival and evasion techniques. In the afternoon the elements divide into three, three-man groups on the return trip and rendezvous at the pick-up point and critique the hike before returning to camp to check in their gear.

Back at the main camp, where they started out three days earlier, the students are given a final critique before boarding the bus back to Pensacola and civilization.

They sleep well on the return trip.

—LT Robert R. Zastrow, USN

WOODSMEN—Cadets learn to survive in wilds. *Left:* Packs are secured for hike. *Rt:* Finding the way. *Above:* Critique.

UP IN THE AIR—As students succeed at Saufley Field, they progress to more advanced CarQuals and formation.

THE BIG HOP —

STUDENT NAVAL AVIATORS begin flight training at NAAS Saufley Field, just a few miles from NAS Pensacola where they underwent pre-flight training.

This is it. Now they can start flying.

Their immediate objective is the T-34 trainer, the *Mentor*.

In Basic Training Group One at Saufley they get their first taste of being a naval aviator. There, and for the remainder of their training, they are part of a squadron, just as they will be in the Fleet. Keen competition between squadrons help set high academic and safety standards.

During the first two days aboard, students receive a thorough indoctrination of what is to come during their stay with—they'll fondly remember—"BTG One." They meet their squadron leader. Also during these first two days, they are introduced to the T-34 familiarization cockpit.

This is an exact duplicate of the cockpit in the T-34. In addition to the regular instruction a student receives in the cockpit trainer, he is free to practice in it any time. It is a familiar sight to see a student sitting in the familiarization cockpit just looking and feeling. He must be familiar enough with this cockpit to find all the controls while blindfolded.

The first week at Saufley is spent on the ground. There's some difference of opinion about this first week. Is the tension less because you know that after this week you're actually going to fly? Or is that last week tougher because you know you are still one week away from that flying machine? One thing is for sure, you have successfully graduated from pre-flight and you are still a part of the two-thirds who eventually get their wings. The work is still hard, but the tempo slackens a little. Not much, but a little.

Following the two-day indoctrination, students spend a full week learning about the plane they are going to fly. Flight procedures and engineering characteristics of the plane are explained.

CLASSROOM WORK is not over. After the full week of ground training which prepares a student for his first flight, he only spends a half day in the classroom. The other half day he flies.

In the classroom it is pretty much a continuation of the courses he had in pre-flight. He studies aerology, communications (both code and voice), engineering, naval aviation orientation, principles of flight and visual navigation.

But to the student who wants to fly, that first week in school drags. He plods through the books, studying and waiting.

Then THE DAY arrives.

Flight P/SO-1 (Pre-Solo 1) is scheduled. He has already been in the familiarization cockpit many times, going over and over the instrument panel. He has also been reading the flight training instruc-

FIRST FLIGHT—Student starts engine after the signal that all is clear.

FOLLOWING GROUND WORK at NAS Pensacola, NavCads take to the air and learn flying through experience.

'SAFE FOR SOLO'

tions for the T-34 *Mentor*. He knows he will not have to pilot the plane, but he wants to impress his instructor. After all, he will have the same man for most of his flights at Saufley, and he wants to get off to a good start.

He meets his instructor in the hangar. They both sign the "yellow sheet" and make sure the plane is ready. This is a must before any plane's take-off. (The "yellow sheet," which is not yellow at all, but white, is maintained on each plane. It shows all flights made, who was aboard, and any discrepancies noted during a flight. If something is wrong with the plane, it shows on the yellow sheet and the plane is not to be flown until it is repaired.)

OUTSIDE THE HANGAR the students step onto a trailer which will take them to their plane. As they move up the line of planes, flight procedures and a swarm of facts and figures learned in the classroom run through each student's mind. He also thinks of the 12 dual flights ahead of him before he can solo. Can he make the grade? At the moment, he's not sure.

The plane seems miles away, but they finally arrive. A big number 222 is on the fuselage.

First the student places his parachute in the front seat of the plane. Then he follows the instructor through the pre-flight checkout. The switches and controls in the cockpit are checked first. Next they start around the plane: No cracks or breaks in the wings. No holes or bulges in the skin on the flaps or ailerons—they move easily. No apparent loose bolts, nuts or cotter pins. Gas tank full (he checks the only sure way—he looks into the tank). Landing gear and engine appear in good order, and—the engine is full of oil.

The student then climbs into the front seat.

The instructor checks his straps, gives him a few last minute instructions and then climbs into the rumble seat.

THEY GET THE SIGNAL from the plane captain that all is clear. The student gets the order to start the engine. This first time it'll be pretty much of a joy ride for him. The instructor warms up the plane, reads and executes the cockpit check-off list. The student takes careful note of this because he knows that on his second flight this is what he will have to do.

He listens intently as the instructor explains everything he is doing. A thumbs up is given to a ground crewman standing by to help get the plane away from the chocks. The instructor follows the crewman's signals carefully.

Now the plane is clear. It proceeds to its place beside the runway. The canopy slides shut. The engine is run up. Everything seems in order.

As the plane surges ahead, the student is forced back in his seat.

PRACTICE MAKES PERFECT—Cockpit trainer helps students learn controls.

The plane clears the ground and gains altitude. In a few short minutes they have leveled off, and the sudden realization comes to the student: "This is it. I'm flying."

The instructor demonstrates the use and effect of controls. He explains course rules and points out prominent landmarks. But he's careful not to tell the student too much. On his first flight the student is encouraged to relax. The student may even take the controls for a short time in level flight.

All too soon—for the student—Pre-Solo 1 comes to an end and the plane is headed for home. The plane banks toward the field. As the plane approaches the end of the runway, it seems as though it may hit the ground before it gets to the runway. It doesn't.

The student is shown how to taxi the plane back to the chocks. Next time he will have to do it.

His first flight is over. As he heads back for the hangar with his instructor, he feels good. He is even more eager for future flights when he'll be at the controls.

Returning to the hangar, they make an entry on the yellow sheet, and sit down for a post-flight talk. After this first flight the student continues to develop. On each flight he learns more and more about the handling of his plane.

FINALLY THE DAY COMES when he is considered ready for solo. The classroom work is beginning to make sense, and he has developed confidence in his own ability to apply the things that he has learned.

Flight PSO-12: *"Safe-for-solo."*

This flight is taken with a different instructor—one who hasn't flown regularly with the student. Here's what the student does on his 12th flight. He must:

- Inspect the plane, start, warm up, perform cockpit check, and test engine correctly.
- Taxi safely and use brakes properly.
- Take off without excessive swerving. Use propeller, throttle, and landing gear controls properly.
- Recognize stall conditions and perform satisfactory recovery from induced stalls. Perform, to the instructor's satisfaction, slow-flight procedure, spins, steep turns, and power-off spirals.
- Demonstrate proper procedure and good head work during high- and low-altitude emergencies.
- Execute safe full-flap and no-flap landings on the first third of a hard-surfaced runway.
- Demonstrate satisfactory drift correction in cross-wind landings.
- Execute a minimum of three landings, including one full-stop landing at a solo field. Make three solo landings if considered safe-for-solo by the check pilot.
- Make a successful approach and landing at base field and return to the flight line.
- Stop engine and secure cockpit correctly.

If the check pilot considers the student is safe-for-solo, he solos on his next flight. His solo flight is similar, but he is not required to execute spins, cross-wind landings, simulated emergencies, inverted flight, or acrobatics.

AFTER HE SUCCESSFULLY completes his solo flight, it is traditional for his classmates to cut off his tie. No man is ever so happy to have a perfectly good tie ruined.

For the next 15 flights at Saufley he learns precision flying. Eight of these are solo. A student is introduced to certain maneuvers during a dual flight and is then expected to fly them on following solo flights. It is hard work, but it's fun. He's flying.

He now begins to feel like a real aviator. He knows he has a lot to learn, but it is starting to come into focus.

During this precision stage at Saufley, students make an important decision, one that will affect their future training. They must choose the flight program they wish to follow. The alternates open are: multi-engine (land and sea); single engine (jet or propeller); or helicopter. For immediate training, however, students are channeled into either jet or propeller-driven planes.

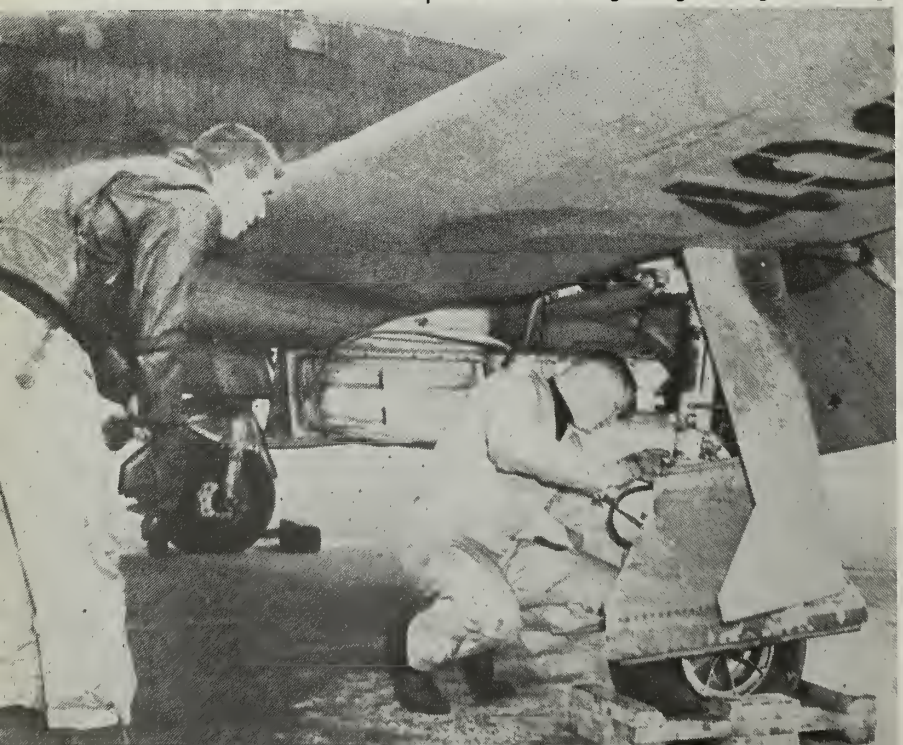
AT THE END of the precision stage at Saufley, the students move again—to another basic flying course and yet another base in the Pensacola area. For 95 per cent of them it is NAAS Whiting Field, located near Milton, Fla., about 15 miles away. The other five per cent move to nearby Forrest Sherman field to start training in the T2V *Seastar* jet trainer.

But before we leave Saufley, let's look at 14 men who are making Navy jet training history. In the past, every jet pilot has first learned to fly in a propeller-driven plane. These 14 men, however, started basic flight training in a jet plane. It is part of an experiment in which the Navy hopes to find out which method produces better jet pilots most economically.

To start this evaluation program, men were picked from volunteers in the Naval Cadet program, the Aviation Officer Candidate program, and the Officer program.

These first-class members are helping to keep the New Navy up to the

CHECK OUT—Prospective pilot follows his instructor through pre-flight check out as he meets his first plane at the beginning of flight training.



minute: ENS P. R. Battenberg; NavCad J. R. Damerom; ENS D. D. Harvey; NavCad K. A. MacDonald; 1stLT R. S. Robertson; NavCad R. W. Vandergrift; NavCad R. F. Warren; NavCad R. R. Bauer; NavCad E. R. Clark (he was the first Navy primary jet student ever to solo in the jet trainer); NavCad J. R. Kilianski; ENS C. W. Lafferty; 2nd LT G. D. McLaughlin; 2ndLT K. S. Smith; and ENS D. D. Young.

The new program means hard work for the instructors. They have to teach in new planes and they've had to develop a new training syllabus. The academic training includes much that is given to propeller pilots, with certain adaptations for jet planes. The students are expected to fly about the same maneuvers in the jet planes as their counterparts do in prop-driven planes.

In the pre-solo stage, students fly the TT-1 *Pinto* on 19 dual flights before they solo. Propeller plane pilots make only 12 pre-solo flights.

The first time up in the jet trainer seems to 'shake' nearly every student. NavCad Joseph R. Kilianski of Morgantown, W. Va., is typical. "I don't know quite how to explain it. I was nervous. I didn't know what to expect. But it was just great. You can't beat jet flying."

ENS C. W. Lafferty, USNR, an officer student from Covington, Ky., remembered it this way. "It seemed too much to handle. There were so many things to remember." But he did.

From Saufley, the all-jet trainees go on to Sherman Field for additional training in the T2V.

THE MEN TRAINING in propeller planes have gone from Saufley to Whiting Field. There they graduate to a different propeller-driven plane —the T-28 *Trojan*, or "the big bear," as it is known to students.

For the students, it's one more jump. "Before we started to fly the big bear, we spent about a week learning about the plane," commented Lloyd G. Pool, NavCad from Miami, Fla. "During our transition from the T-34 to the T-28, we flew nine hops."

Whiting is divided into two fields, North and South. At North Field is Basic Training Group 2. Here, besides the transition to the T-28, all students receive instruction in precision flying and acrobatics. For this, they spend eight weeks and fly 26 flights. But flying is what the students like. When it rains, or the weather is closed in, the regular schedule of half day on the ground and half day flying is interrupted.

BLACKBOARD SESSION—Aviation students get some fine points on precision flying. By the end of 15 flights they must be able to perform many maneuvers.

On those bad days the students attend foul weather lectures, safety lectures, and learn what is ahead of them in the training. "We have to be careful not to give them too much of this," commented one of the instructors. "It's a waste of everyone's time if they aren't getting any good out of the lectures."

Through both the transition and precision stages, the students do maneuvers they had previously flown in the T-34 trainer.

During 10 acrobatic flights they fly four dual flights. On the remaining flights they practice loops, barrel rolls, precision spins, wing-overs, half-Cuban 8's, Immelmann turns, stalls and spins.

They're ready for the next hurdle.

OUT YOU GO—Students line up for their turn at Kiwi, the bail-out trainer at Saufley Field. It was named after the New Zealand bird that doesn't fly.

about 10 feet behind the plane ahead.

On the first dual flight in formation flying, they rendezvous to the right of the lead plane. First they make position turns, then break-up and rendezvous. Gradually they work up to a four-plane formation, with each plane on a 45-degree angle from the one ahead.

This is flying the men haven't seen before. This is working as a team. Until this time they have worked alone in the air. Now they must keep their eyes on the man ahead. That's where instructions will come from. And for the most part, the instructions are visual. Rarely does the squadron leader give instructions over the radio.

NEXT TASK is day and night navigation. Up to now the men have flown only in the general vicinity of the base. They have become familiar with the landmarks and have had very few navigational problems. Now they are confronted with something different.

Trainees fly their *Trojans* on two solo day navigation flights. An instructor follows in another plane. On the second hop, four student pilots fly cross-country to a designated airport, land, refuel, and return. They alternate as squadron leader.

The night navigation stage is similar. Students fly two cross-country flights over a prescribed pattern. They fly over designated check points at a previously assigned altitude, and two-way communication is mandatory. On the day navigation flights, the radio is not used.

When these stages are completed, jet trainees have been at South Field for eight weeks. The prop students' course, covering about the same subjects, lasts six weeks.

Both groups return to Saufley Field for the next phase of the training—aircraft carrier landings.

THE CQ (carrier qualification) stage of both aviation training pipelines is identical. This means 14 flights and three weeks at BTG5.

Nearly all the flying in this stage is done *below 200 feet*, and at speeds close to a stall (78-80 knots). At these low altitudes, the student real-

Pipelines: Props, Copters

FROM THIS POINT, the flying starts to become specialized (according to the future flying plans of the students). Still in Basic Training Group —BTG 2— at Whiting North Field, they start courses in either jet or propeller-driven planes.

Jet students aim for high performance jet attack or fighter aircraft in Fleet squadrons. Those who choose the prop course look forward to Fleet duty in antisubmarine, patrol or attack aircraft.

A choice of courses is given, according to class standing and the needs of the Navy. Men who will fly propeller planes remain in BTG 2 for another six weeks. During that time they continue the half-and-half routine between the classrooms and flying. They practice basic instruments, radio instruments and night familiarization. Twenty-three flights are involved. Three of these are at night. Two of the night flights are solo.

DURING INSTRUMENT FLIGHTS, the student pilots—after they have worked many times in the link trainer and blindfolded in the cockpit familiarization cockpit — must taxi their plane, take off, land, and do certain other work in the air.

After finishing the instrument flying phase, the propeller trainees move to South Field for formation flying, and day and night navigation.

The jet pilot trainees have already moved to South Field, where they fly the T-28. Instead of six weeks' instrument and night flying at North Field, they had two weeks. They flew five dual flights in the T-28, and then three night familiarization flights.

For both the jet pipeline and the prop pipeline pilots at South Field, the program calls for formation flying and day and night navigation in the T-28. The jet students fly 19 flights. The prop boys fly 17. Jet trainees are sometimes given training in aerial gunnery here.

Up until this point student naval aviators have been told to stay away from other planes. Now it's different. They must fly in parade formation at a 45-degree angle from the plane ahead with only 65 feet between corresponding parts. In this position, they are about 10 feet below and

izes a stall could mean disaster.

One of the first men these students meet is the LSO (landing signal officer). He controls the actual landings aboard a carrier.

For 13 hops students learn to fly low and slow and to land in an area the size of a carrier flight deck. Bronson Field, near Saufley, is marked off in areas of this size.

The students get their first taste of the short field on the first hop. It is a demonstration flight. With the instructor piloting from the rear seat, they make eight FCLP (field carrier landing procedure) passes, and practice flying at slow speeds.

The next hop is solo. A student practices what he was shown during his first dual hop. On the third flight, he is again joined by his instructor. This is his first business meeting with the LSO, and a "safe-for-solo" flight in field carrier landing procedures.

THEN ON FLIGHT NUMBER 14, he actually lands aboard a carrier.

He leaves Saufley Field and heads for USS *Antietam* (CVS 36), which is underway in the Gulf of Mexico.

and Jets

As he approaches the floating airstrip, his first sensation is the smallness of the ship from his vantage point.

As he heads in for a landing, he slows to about 80 knots, his eyes fixed on the LSO as he comes in just 15 feet over the deck.

When the LSO gives the signal, the student cuts his engine.

The plane drops to the deck. The low hanging tail hook catches the arresting wire and the plane is dragged to a halt.

Five more times this is repeated by the student before he qualifies.

For LTJG Dick Newell, an AOC, who had made the usual field landings at Bronson, the landing aboard *Antietam* was almost routine. For others it was more exciting.

To most, it is the end of their basic training. For the rest, they have one more step to go before moving to advanced training. Now the paths begin to separate further:

- The jet trainees are off to Memphis, Tenn., for six weeks' additional training in basic and radio instruments. At Memphis they will fly the jet T2V *Seastar*. This will be their first training in jet aircraft.
- Most of the prop men go directly to Corpus Christi, Tex., for training in either VS (they will fly S2F) or VA(P)/VP (they will fly the multi-engine SNB).
- For one small group, it's helicopter training. These men stay in the Pensacola area, but move to nearby Forrest Sherman Field for 12 weeks. They, too, will fly the SNB, a Navy multi-engine trainer, before taking helicopter training.

ANOTHER GROUP, however, is still working in basic training. Remember those men who left the training pipeline after Saufley and started jet training at Sherman? The course there is 25 weeks. They still have four weeks to go.

These men have been studying much the same material and flying the same maneuvers that the others have been carrying out in the propeller-driven planes.

AIRBORNE—Flight students soon get familiar with their plane and the sky that is their medium for travel.

Besides flying the 500-knot-plus T2V for about 120 hours, however, they have continued in the classroom with aerology, communications, engineering, principles of flight, special weapons, customs and traditions, and history of world sea power.

At the end of their 25 weeks at Sherman, they move to Corpus Christi, Tex., for advanced jet training. They have already recieved basic instrument training in the T2V at Sherman. They bypass the instrument training being taken at Memphis, Tenn., by those jet trainees who had flown the T-28 at Pensacola.

FOR THOSE MEN who go to Memphis, there is another big change. For the first time, they fly a jet plane. In this case it is the T2V. (The T2Vs

BACK TO EARTH—Student and instructor walk down striped safety lane after a flying lesson in the Florida sky.

ON DECK—Pilot-to-be makes a pass at carrier's flight deck while receiving signals from the plane director during carrier qualifications at sea.

are being phased out of the program both at Memphis and Sherman Field by the T2J.) During six weeks at Memphis, students fly 20 hops. Ten of them are in basic instruments and 10 in radio instruments. Transition flights and basic instrument flights are flown simultaneously.

In basic instrument training, students perform difficult maneuvers, using only instruments. Later in the radio instrument stage, they apply the knowledge already gained by flying from point-to-point solely by instruments without referring to the ground. Earlier, as you remember, they had used ground check points for flying cross-country.

Every flight at Memphis is with an instructor. No solo flights are flown. For these men, it is the end of basic training. Then, it's off to Corpus Christi for finishing touches.

THEN THERE ARE the whirly bird pilots, who remain at Pensacola. These men must train in multi-engine aircraft, as a prerequisite for helicopter training. This is the only group trained at Pensacola that doesn't move to Corpus Christi for final training.

The future copter pilots spend 12 weeks at Sherman learning to fly the SNB. At the end of that time they are able to solo the plane and have become familiar with basic and radio instrument flying. They have also flown cross-country.

Completing their 12 weeks, they move on to the last step in their quest for the Wings of Gold. Ellyson Field, in the Pensacola area, is the final phase of the training for the chopper boys. Here the accent is on flying. Very little training in any special phase of work in helicopters is stressed. That is left to the squadrons into which these men will go after they get their wings.

"Flying a helicopter is like flying fixed wing aircraft by instruments." That's the comment you hear from the copter student.

Almost every imaginable maneuver is taught in the whirly bird. And the hardest thing to teach, confided one instructor, is to hover. Although this is the main attribute of helicopters, it is difficult to master.

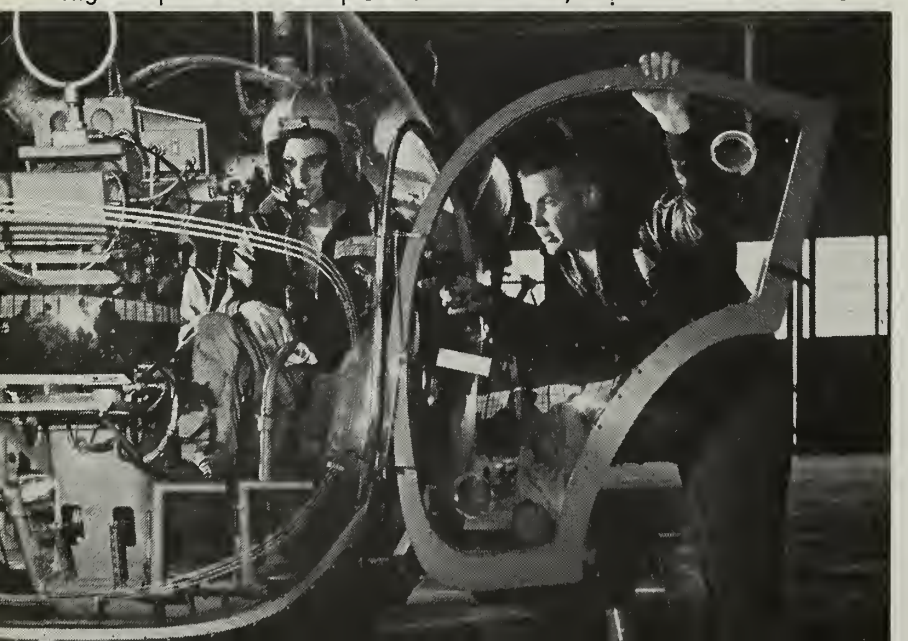
After finishing the 60 hours of flying at Ellyson, the men are ready for graduation. This means a commission as Ensign or 2nd LT for NavCads and Wings of Gold for everyone. It's a proud day.

Rear Admiral Joseph M. Carson, USN, Chief of Naval Air Basic Training, is there to give out the wings. Each student usually has his parents or some special guest to pin on his wings.

The ceremony is short. Admiral Carson hands over the wings. The guest pins them above the pocket.

Now it's official. "It feels terrific," says ENS Roger Hulson, USNR, a former NavCad. "And it's a wonderful feeling to be able to fly confidently. Right up until that last flight I felt just a bit unsure of myself. Then on the last flight, everything seemed to come into focus. I felt that I really had it then."

TAKE YOUR PICK—As flight training progresses choice between jets, multi-engined planes or helicopters is made. Here, copter trainee checks craft.

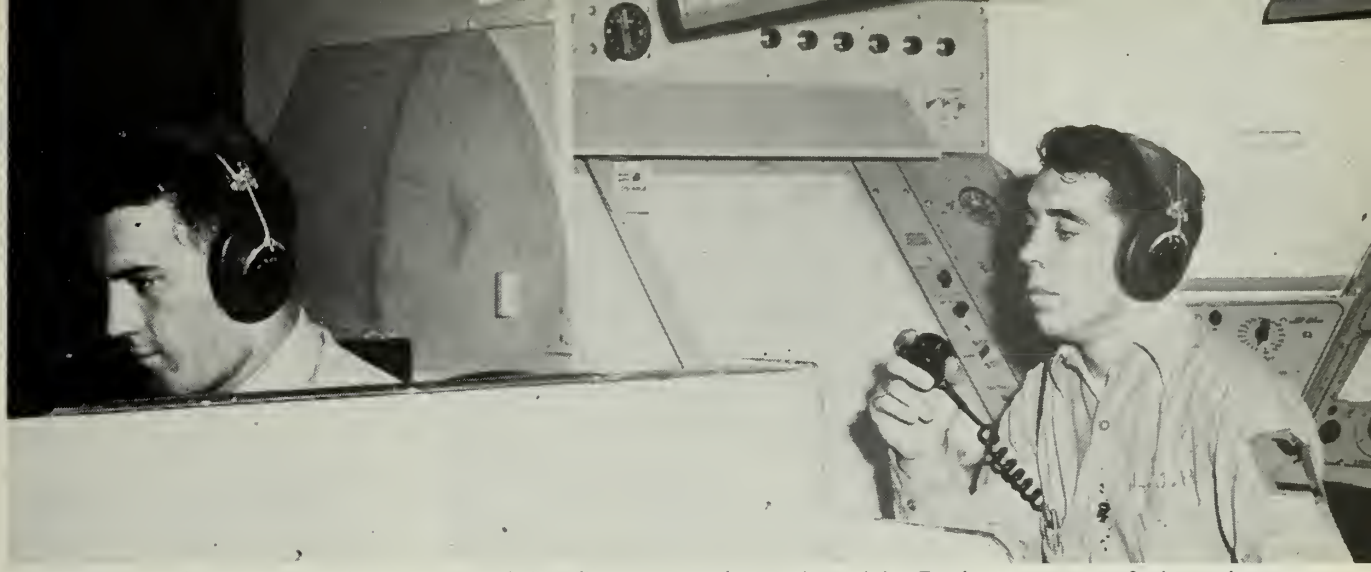


AND SO IT GOES. Every person who receives his Wings of Gold could tell his own story—a story filled with excitement and hard work. Each would highlight a different part of the training.

But they all tell one story, however—that of hard-working instructors, training surpassed by none, and a confidence that no man can take away.

These helicopter men are now naval aviators. They are part of a proud and highly skilled group. They are, by the way, the only group who ever receive their Navy wings at Pensacola. For most students, however, Pensacola is a stepping stone. For them Corpus Christi is where the finishing touches are put on and where the wings are passed out.

—Erwin Sharp, JO1, USN.



LIKE REAL — Link trainer teaches jet control handling to student pilot while Tradevman gives flight orders.

Tough, But Tender

ALL FLYING NIGHTMARES such as iced wings, becoming lost over the ocean, disabled instruments, engine failure, fuel trouble or an inoperative radio can be simulated on stationary trainers now being used to train student naval aviators.

These training devices can duplicate almost every situation a jet or conventional airplane could encounter, without danger to pilot or plane.

In the basic instrument trainer, for example, a pilot can practice instrument landings, ground control approaches, direction finding, and primary instrument training.

Operating a trainer is also much less expensive than flying an airplane. One hour's operation of a flight simulator costs the government about $2 for electricity. The fuel for a conventional trainer-type aircraft would cost $10 to $150 an hour.

At NAAS Kingsville, Tex., a new Navy Link Trainer for the F11F *"Tiger"* jet plane is now in use.

The trainer, aside from being the first model for F11F instruction, is also the first Navy flight simulator to operate on direct current. All previous ones have operated on alternating current. This new development has proved to have many advantages of actual flight simulation and ease of maintenance.

The new trainer is mounted in a 40-foot trailer which weighs 21 tons. The trailer contains a student cockpit, an instructor's station, and racks of electronic equipment necessary to operate the trainer.

The trainer cockpit is identical to the actual one in the F11F. The only deviation from normal appearance is the diffused canopy which seems to have a coating of soap over its surface. This diffusion is accomplished by spraying the canopy with a compound similar to that used to mothball ships and aircraft. When used in this way, however, it serves an entirely different purpose.

When the pilot is in the trainer during flight simulation with the canopy closed, lights of varying brightness are flashed on and off, bright and dim, to give the illusion of flying through cloud patches. A single naked bulb giving off intermittent flashes of light gives a vivid imitation of lightning flashes. The diffused canopy turns these flashes of light into reproductions of these different flying conditions.

As the pilot continues his simulated flight, the trainer and all instruments react exactly as an aircraft would under a pilot's guidance. The cockpit moves up and down, or banks, or pitches, and the fuel gauge moves toward empty. Each instrument gives an accurate indication to help a student ready himself for a new plane. An added effect of realism on the landing approach is induced as the pilot lowers his gear for a landing. In normal aircraft operation, landing gear comes out hard and fast. It gives a heavy thump that can be felt by the pilot. This action is accurately imitated in the trainer.

A great advantage of a flight simulator is the ability to reproduce engine operating conditions that would be impossible to induce in a live engine without danger to the engine, aircraft and pilot. Some of these are ignition failure, compressor surge, engine overspeed, bleed valve stuck open or closed, engine icing, flameout and air start, and engine seizure.

TRAINER operator gives OK to land.

By meeting these conditions in a simulated flight, the pilot will be better prepared to face the many emergencies which could arise in the course of an actual flight.

Today's student naval aviators receive a minimum of five hours' instruction in this trainer before they actually fly the F11F.

PILOT checks his simulated plans.

Prepare for CRASH — in Training

Fittingly enough, since the Dilbert Dunker is devoted to the somewhat grim business of survival, it is not a glamorous piece of gear. But it is efficient.

It consists of what looks like the cockpit of an actual plane, sawed off square at the bulkhead fore and aft. The windshield frame has been retained, but the plastic has been knocked out. The former instrument panel has been heavily padded. The whole job is painted a bright, fire-engine red. It has to be repainted often to withstand the strain of countless duckings.

Although there is a Dunker at just about every naval air station, the one at Pensacola is unique. Under the guidance of Instructor Jack Martin, who presides over Training Tank One, every pre-flight student makes at least one successful voyage in the Pensacola Dunker. It was Jack Martin who also nursed the ALL HANDS *neophyte through* his *plunge, which is described here:*

IT MUST be mentioned that the outfit you wear—when introduced to Dilbert Dunker—is designed more for utility than comfort or beauty. First, a pair of swim trunks, then a pair of wet, cold, and clammy pants and shirt recently shucked by a preceding student. After pouring the water out of a pair of sneakers, you put them on.

"Even though we've padded the inside of the cockpit as well as we can," explains Instructor Martin, "you'll get your feet cut up a bit if you don't wear these. Of course, in a real plane and a real situation, there will be more possibilities of getting cut. But you'd be wearing more clothes."

Meanwhile, he was getting me into a lifejacket and parachute pack. While he checked my chute, he did not forget the old gag about this guy "Buaer" getting around almost everywhere. It did much to make me feel at home and recalled to me the days of my youth. Some things never change.

"But this pack is a little different from standard issue. It won't do you much good up in the air, but here it works fine. Instead of containing the regular nylon parachute, we've put a block of wood in it. We've found it has the same specific gravity and we don't have to replace it quite

so often. A parachute will keep you afloat for about five minutes—or until it becomes watersoaked—and then will sink like lead. You can't possibly sink with this. And, if you get into trouble, we most certainly can get to you within "—he smiled when he said this—" five minutes."

ME GET INTO TROUBLE? Never! Nevertheless, what with all the wet clothing, the lifejacket and parachute gear dangling behind and below me, it was a little difficult to move and it was nice to be reassured that there was no possibility of sinking. It didn't feel that way and I was happy to recall that they didn't do it like that in the Old Navy.

Viewed from the far end of the pool, the Dunker is not terribly impressive—at first. As you approach nearer, its aspect changes. In its take-off position, it is poised at the top of a two-railed track about 20 to 25 feet above the surface of the water. A vertical ladder leads to a platform alongside the Dunker. After its descent, the Dunker is retrieved by a cable attached to its rear end, which leads to a small motor mounted at the top of the incline.

A heavy shock cord is attached to the Dunker's front end. This is to snub its forward motion when it hits the end of the rails and also to make sure that it flips the Dunker over properly. The rails descend into the water at about a 45 degree angle.

A boatswain's mate stands on the platform to make sure you are seated properly, lifebelt properly secured. When all is ready, he presses a buzzer.

That releases the Dunker. Away you go into the wild blue yonder. I was introduced to the boatswain's mate, but I had other things to think about and regret to say I don't remember his name. My apologies. I can remember faces real good but names always elude me.

MARTIN broke into my train of thought. "Remember everything you're supposed to do? Good. Go right on up. Good luck. Just remember that thousands of men have done it before you and they survived. You've got nothing to worry about."

True, but this was me. Weighed down as I was with gear, the ladder presented a considerable obstacle course in itself. About halfway up, it occurred to me that I could get out of the whole thing if I just happened to miss a handhold. If I were to land in the hospital, they couldn't really expect me to go through with this business.

While I was pursuing this brainstorm, I reached the top and, to my surprise, found Martin standing there waiting for me. I'm still not sure how he got there so rapidly.

From the floor, the Dunker didn't seem to be much but, standing beside it, it was of respectable size. My most immediate problem, loaded down with gear as I was, was to throw a leg over the side and climb in. I made one or two feeble attempts when Martin suggested: "Why don't you use the step? Most people do. It's a lot easier."

Once in the cockpit, I couldn't figure out what to do with the parachute pack. "It's a seat," said Martin patiently. "Why don't you try sitting on it?" I did, and was glad to discover that it fitted the seat perfectly. I made some light remark wondering whether this was the way they did it in the Old Navy. My question was ignored as they threw two straps over my shoulders and down through the seat belt.

"You may feel a little constricted now, but I assure you they won't get in your way at all. When you hit the water, all you have to do is release the safety belt and the whole thing will come clear. Keep your right hand on the stick and don't forget to hold your left arm in front of your face. . . . That's all there is to it. All set?"

I WOULD HAVE liked a day or so to think it over, but they mistook by blank look for one assent, because I heard the buzzer.

The Dunker stood poised for one

Tank One

awful second and, before I could tell myself: "This is it—this is really living," the whole contraption gently leaned forward and went down faster and faster.

Next thing I knew I was hanging upside down in the cockpit in the water. I guess I was so surprised I must have hung there for several seconds without functioning at all. Then I began to remember my instructions. Your natural instincts tell you to claw madly straight upwards. Your only desire is to get out of there—quickly. This, however, is the point of the whole Dunker technique. It teaches you *not* to do this. If you do what comes naturally, you will be drowned like a rat in a trap.

I didn't have time to feel wet nor, although I don't remember having taken that deep breath before I hit, did I run short of air. Maybe I forgot to breathe; I don't know.

I did count to three, but not as slowly as I had been instructed. I opened my eyes and was glad to see that I was all there and that the situation was just as I was told it would be. I was hanging upside down in the cockpit and the Dunker was slowly settling.

STEP ONE WAS, reasonably enough, to unhook the safety harness. Then, according to the instructions Jack Martin had pounded into my head (and the head of every student who goes through Pensacola), I grabbed the windshield and pulled downward *hard*. Then, as soon as I was clear I was supposed to shoot up at the side to the right at 45 degrees.

I suppose I must have done as I was told, because I did hit the surface of the water promptly (but I came up on the wrong side). I struck out briskly for shore—in this case, the side of the pool. The parachute pack was no handicap at all. If I had been dragging an anchor, it wouldn't have slowed me up.

That's all there is to it.

Why is the Dunker of such importance? Because it helps to save men's lives. Before the introduction of the Dunker in 1943, approximately 95 per cent of the Navy pilots who went down over water were fatalities.

Today, largely because of the Dunker technique, the loss of Navy pilots who crash in the ocean has been reduced to a fraction of that figure.

DILBERT DUNKER trains Navymen with a splash. *Below:* Instructor gives an OK.

AND ON

CONGRATULATIONS—Student flyer is given hand-shake by OIC after completing his first flight in F11F *Tiger* jet. His wings of gold are near.

From Pensacola, the Wings of Gold story moves on to Corpus Christi. The following material on Corpus Christi was made available by the Naval Air Advanced Training Command.

IT IS DOUBTFUL whether there is a single pilot in the Navy who hasn't at one time or other landed at Corpus Christi. He either took flight training there, or he's stopped off on cross-country hops.

To these men, the Naval Air Station at Corpus Christi represents the very best that naval aviation has to offer.

The station itself, known as the home of the Naval Air Advanced Training Command, is comparatively young so far as Navy installations go. On 12 Mar 1959 it had its eighteenth birthday.

Much has happened in those 18 years. Many changes have taken place. Thousands of men have come here for training, have completed that training and have gone.

With the exception of helicopter pilots, who receive their wings after training at Pensacola, Fla., all other prospective naval aviators leave Pensacola with nothing but a vision of Wings of Gold faintly visible on the horizon. The vision comes one step closer to reality when they report to NAATC Corpus.

When the first group of 52 cadets arrived at the station on 20 Mar 1941 (only eight days after the commissioning ceremonies) they were greeted with the noise created by riveters, carpenters, bulldozers and tractors. Ground school started for the new students on the first of April and the "University of the Air" was in session. This Naval Air Station was soon to be referred to as one of the largest and finest in the world. It has expanded from 2050 acres to more than 6800.

FROM THE BEGINNING, training of pilots was extended and conducted with such vigor that before World War II was over, more than 35,000 men had completed their training and received their wings of gold. Several thousand additional naval aviators have completed training in the Corpus Christi area since World War II. Hundreds more are at present working for their wings.

The march of time has been measured off at NAS Corpus by the disappearance of old planes, and the appearance of the new. When VO-type planes were taken off battleships and cruisers, all VO training stopped; in March 1949, the SU2s were retired. Jet training commenced in the Advanced Training Command in mid-1949 when the first TO-1 *Shooting Stars*, reached Corpus Christi.

That same year the Blue Angels, the Navy's world-famous flight demonstration team, moved into jets and their home base was changed from Pensacola to Corpus Christi. Although deactivated during the Korean conflict, the Blue Angels were reactivated in 1951 and remained at Corpus until July 1955 when they moved, in their F9F-9 *Cougars*, to Sherman Field.

Training in the south Texas area is now in three types—jets, anti-submarine, and seaplanes. The TV-2s, ADs, S2Fs, F9Fs, SNBs and P5Ms are a far cry from the "Yellow Perils" of the early days. But the mission is the same.

Whether the student chooses single or multi-engine training, it all leads to the same thing—those wings of gold.

The Training Department at NAS Corpus administers and coordinates all formalized aviation training that is conducted. The advanced training units (ATUs), the academic training division and the training aids division are an integral part of the Training Department. These units and divisions provide direct support to the various phases of the training program.

The "book learnin'" of student naval aviators in the four ATUs aboard the station is the responsibility of the academic training division. Shortly after being assigned to a class in one of the units, the student plunges in. The subjects he tackles are instruments, survival,

TO CORPUS CHRISTI

ordnance, engineering, electronics, navigation, amphibious warfare, antisubmarine warfare, aerology, communications and naval orientation.

IF HE'S A PROSPECTIVE attack pilot, he's assigned to ATU-301 at NAS Corpus.

On completion of the advanced instrument course he flies the AD *Skyraider,* single-engine carrier plane. At ATU-501, he receives co-pilot training as well as extensive navigation training in either the P5M *Marlin* seaplane or the P2V *Neptune* landplane.

Prior to training at ATU-501, the prospective patrol pilot receives instrument training in SNB two-engine landplanes with ATU-601, followed by navigation and flight proficiency training in ATU-611, which uses the S2F *Tracker* aircraft.

Here's a rundown on the ATUs.

• ***ATU 601***—In line with changes in the Multi-Engine Training Program, Advanced Training Unit 601 was activated on 1 Feb 1958 at NAS Corpus. The mission of this unit is to provide the full treatment in instrument flight procedures for all prospective multi-engine pilots. Upon satisfactory completion of the unit's syllabus, as a graduation present each student pilot is awarded a "Standard Navy Instrument Rating" or "White Card," as it is commonly called.

ATU-601 has about 80 flight instructors. These men are all experienced pilots with at least one tour of Fleet duty behind them. To provide the optimum in training and to maintain a standardized syllabus, instructors complete a comprehensive flight and ground syllabus of their own before receiving students for the first time.

Each student receives seven weeks of instruction while attached to ATU-601. During most of this time he flies half a day and attends academic training the other half.

Once the students are assigned to an instructor, they remain with him until completion of the course of instruction within the unit. This not only allows each instructor to know his students well but helps him provide a much better training. The aircraft currently in use is the Navy's proven multi-engine instrument training, the SNB.

• ***ATU 611***—A second multi-engine training unit, designated ATU-611, was commissioned at Corpus a month after the birth of ATU-601.

Students entering ATU-611 from ATU-601 receive 11 weeks of training in the S2F *Tracker.* They also get navigation and flight proficiency training.

Future naval aviators get more out of their training at the unit than just the ground school and flight courses.

They build up confidence in themselves in their solo work, field carrier landing practice and their first actual multi-engine carrier landings on the aircraft carrier USS *Antietam* (CVS 36). They begin to see for the first time actual results of their flight training.

And those wings of gold are nearer.

Graduating from ATU-611, the students enter ATU-501 as field and carrier qualified pilots.

• ***ATU 501*** — Advanced Training Unit 501 plays an important role in the training of student pilots before joining a Fleet squadron. Here students receive co-pilot familiarization training in the P5M *Marlin* seaplane and P2V *Neptune,* along with 72 hours of in-flight navigation training. ATU-501 trains pilots for the Fleet.

FINAL STEP—Jets fly formation over administration building at Corpus Christi, Tex., symbolic of wings to come.

FOR SAFETY'S SAKE—Flight instructor of ATU 213 goes over yellow sheets with advanced students to check the plane's performance after their flights.

It also trains pilots in navigation techniques used by all multi-engine aviators.

First there's a week of ground school, consisting of engineering instruction in the P5M or the P2V. Then there are a couple of four-hour co-pilot familiarization training flights, in either of the two planes.

Now they start their in-flight navigation training. They're really on the way, with two six-hour day-night navigation flights in the R4D. Twenty-four hours more of in-flight navigation in the "type" aircraft—and they'll be flying with the Fleet. This 24 hours of navigation consists of navigation and ASW flights to familiarize students with the current Fleet ASW doctrine.

To get them really "indoctrinated," they get an introduction to administrative functions similar to those they'll encounter after reporting to the Fleet squadron, including collateral duties held by naval aviators throughout the Fleet. Graduation from this unit earns the student pilot his wings.

HERE YOU GO—Advance student awaits assignment by unit officer.

• ***ATU 301***—Not all of the students move into ATUs 611 and 501 to get their wings. Some complete their training at ATU-301. The one single-engine prop plane training unit in the command, it readies its attack pilots in the AD *Skyraider*. With more than 53 of these planes, it can boast of better than 70 per cent availability owing to excellent maintenance.

The flight syllabus is approximately 14 weeks long and includes seven phases: familiarization, formation flying, bombing and strafing, tactics and acrobatics, navigation, simulated and actual carrier landings, and AD instruments.

Three students and an instructor team up to form a "flight" and advance through the syllabus together. All flying is solo. This is the first solo work the ATU-301 student receives in the advanced training command.

On graduation from the unit they receive their Navy wings of gold—then head for an attack squadron in the Fleet.

Kingsville Naval Auxiliary Air Station

Flight training aboard the Naval Auxiliary Air Station, Kingsville, Tex., is accomplished primarily by three Advanced Training Units utilizing experienced naval aviators instructing in Fleet type and trainer type aircraft.

Fleet type aircraft currently being used are the F9F-5 *Panther*, F9F-8B *Cougar* and S2F *Tracker*. The trainer now in use at Kingsville is the popular F9F-8T *Cougar*.

Another unit, for the present in an evaluation status, will, in the future, give advanced training in the F11F-1 *Tiger*, a Fleet-type aircraft. Students reporting aboard are those who have just completed basic training at Pensacola, Fla.

NAAS Kingsville first came into being in the fall of 1941, when a group of civic leaders suggested that having a desirable climate and scarcely populated area, Kingsville seemed extremely suitable for a military airfield, bringing with it mutual benefits for both the military and civilian community.

Pearl Harbor resulted in renewed and vigorous efforts to establish the station. A farmland site of 3000 acres was purchased and construction begun. Buildings began to spring up overnight as construction crews worked around the clock. On 4 Jul 1942, NAAS Kingsville was commissioned. It has become known as the major auxiliary air station in the Naval Air Advanced Training Command.

Today, NAAS Kingsville has expanded from 3000 acres to more than 5000. Further expansion and new construction continues. Recently, two new air-conditioned enlisted barracks were opened. Also in operation is a new air-conditioned mess hall. Construction will soon begin on two more EM barracks.

Runways aboard the station have been lengthened and a larger, more modern hangar, now constructed, will open soon.

• ***ATU 402***—Advanced Training Unit 402 trains student naval aviators in the S2F *Tracker* ASW aircraft to prepare them for Fleet antisubmarine squadrons.

The student who receives his wings after completing the ATU-402 syllabus is an all-weather qualified naval aviator who has flown approximately 158 hours as pilot, has 48 hours of instrument time and 13.5 hours of night flying.

In addition to his flying, he has completed three weeks of academic training in naval leadership, military courtesy, naval orientation, communications, aerology, ASW and other subjects.

ATU-402 emphasizes safety, whether flying or operating on the ground. When the student reports aboard the unit, he is shown the safety record and is reminded that his predecessors worked hard to obtain this high standing. This is also the time that the Safety Officer ex-

plains the slogan of the unit to the student:

"Flying in itself is not inherently dangerous, but it is mercilessly unforgiving of human carelessness."

• **ATU 212**—Jet student aviators reporting aboard for training at ATU-212 are a somewhat select group. They've just completed the VF/VA Basic Training Syllabus at Pensacola, Fla., the first step toward their wings. Now they'll be initiated into swept-wing jet aircraft and thoroughly trained in all phases of jet fighter training.

The training starts with jet familiarization and advanced instruments, followed by various flights in air-to-air gunnery, air-to-ground rockets, bombing, high- and low-altitude navigation and cross-country flying. As they advance, they receive fighter tactics and loft bomb maneuvers. The final step of the training is the carrier qualification aboard uss *Antietam* (CVS 36), the angle-deck ASW carrier based at Pensacola, Fla.

The course completed, the student is presented with his wings—and another thoroughly trained fledging aviator is on his way to a squadron.

During this nine weeks at ATU-212, the student pilot flew approximately 140 hours in the *Cougar*, (F9F-8T and F9F-8B). He was a member of a unit which, in 1958, flew more than 29,000 hours with an over-all accident rate of 2.05 accidents per 10,000 hours. The officers and men of 212 are constantly seeking to improve the quality of training afforded the student aviators, bearing in mind that quantity is a secondary goal.

ATU-212 only recently received a full complement of swept-wing aircraft. Before that time, the TV-2 was flown. This syllabus was essentially Jet Instrument and Tactics. ATU-212 trained with the TV-2 for five years, beginning in 1953. The F9F-8 *Cougar* is expected to be unit aircraft for some time. At present, different syllabuses are being revised to include a final phase of training with the F11F *Tiger*.

• **ATU 202**—The mission of Advanced Training Unit 202 might well be compared to that of a graduate school. Just as in graduate school, students who arrive here have a sound foundation in the field of their choice.

The basic rudiments of driving a flying machine around the sky have already been learned. The mission of 202, therefore, is not to teach, but rather to expose the students to advanced information. Admittedly, there is a fine line separating the two. However, the difference is significant in that the program offers a guide to learning rather than to push the student into it.

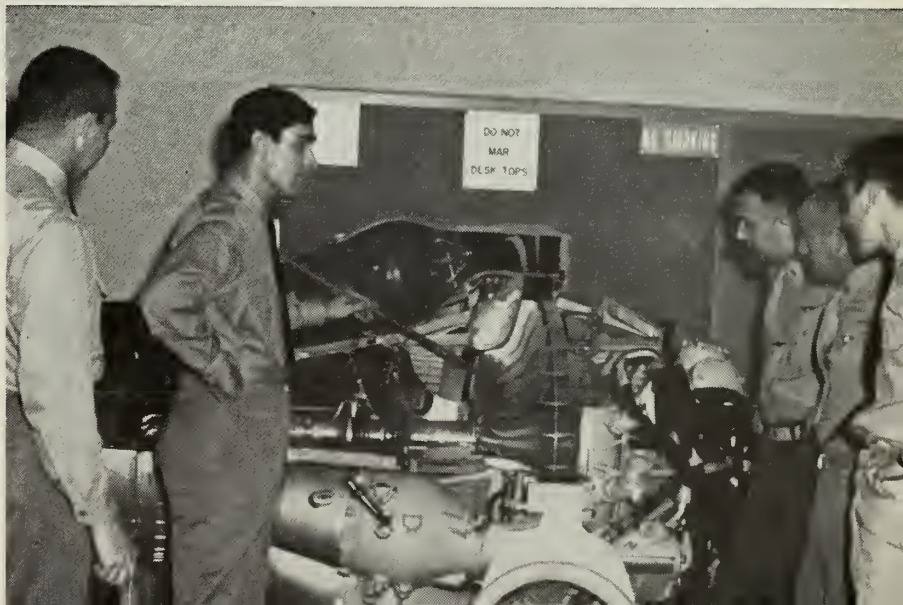
To accomplish its mission, 202 is currently operating two distinct syllabuses. The older syllabus (on the F9F-5 *Panther*) is nearing an end. It is basically a jet introduction and tactics course. In it, formation flying, gunnery, rocketry, bombing and navigation are taught and a number of hops on instruments are made to maintain the proficiency gained in all-weather flight.

The newer syllabus is followed while flying F9F-8 *Cougars*. It includes all-weather flight. Other significant differences are jet carrier qualifications, loft bombing maneuvers and, of course, the basic one in which they are introduced to swept-wing aircraft.

• **ATU 222**—Advanced Training Unit 222, newest of the advanced training units, was established in December 1958 by the Chief of Naval Air Training to determine whether high performance aircraft such as the F11F *Tiger* could be

WINGS AHEAD—Prospective naval aviator flies high out of NAAS Kingsville, Tex., while on advanced training flight that will bring him closer to wings.

GETTING THE WORKS—An instructor points out the working components of an F9F-8T jet engine during academic training period at Corpus Christi, Tex.



used profitably in the training command. The original composition of the unit was 12 instructors from various other units in the command.

The first aircraft were received in the middle of December. All instructors received their initial check-out and began the evaluation program. Progress has surpassed most expectations as to the practicability of use by student naval aviators. Up to the end of March, three students had completed a check-out program and use of the F11F now appears better than ever.

Following another group of tests, final evaluation will be made and a definite syllabus will be established. The proposed syllabus includes transition to "high-performance afterburner-aircraft" and an introduction to tactics and weapons, including air-to-air missiles.

Creation of the program will decrease transition from training command to Fleet-type aircraft and, in the long run, make a definite increase in the quality of future naval aviators.

NAAS Chase Field

The Navy's first all-jet training base is located at the Naval Auxiliary Air Station Chase Field, Beeville, Tex. Here's the order of the day for flight training:

Study it, practice it, use it.

The advanced flight student checking in for his final phase of training at Chase Field wants and gets action. He doesn't however, jump into the cockpit of a swept-wing *Cougar* without first getting a lot of preparation.

Before he has earned his wings, he will have successfully completed 160 hours of academic training at Chase. The subjects cover F9F-8 engineering, principles of flight, survival, flight physiology, instrument navigation, operational navigation, aerology, flight rules and regulations, gunnery, communications, electronics, warfare orientation, aviation safety and aero-medical review.

He puts in three hours in emergency procedures trainers and logs 21 hours in the jet link trainer. He will have flown a minimum of 120 hours in the F9F-8, been briefed—and debriefed—an average of 180 hours. (In debriefing, the student reports back on what conditions he found and how they differed from his briefing.) Then he will be carrier qualified in the swept-wing aircraft with five or more carrier landings.

Turning out more than one student a day in a year's time, the base's two Advanced Training Units—203 and 213—each have a staff of 65 flying officers and 385 enlisted men. For half the year (the summer half in southern Texas), the units operate on a wing system, launching five times a day (four daytime launches and one at night). During the winter, shorter days and less favorable weather cuts the schedule down to three day launches and one night.

INCOMING STUDENTS report aboard the Beeville station at various times during the week. At first, they might think they are not doing much—that is, until the next Monday rolls around. From then on, it's a fast life geared to the jet age action sought by up-and-coming young aviators.

On that first Monday after he arrives at Chase Field, the flight student checks into his assigned training unit—either ATU-203 or 213—then heads for academic training, where for two full weeks he will do battle with such principles of flight training as F9F-8 engineering, survival, and Flight Rules Regulations.

For the next eight and a half weeks he will split his day between the books of academic training and actual flying. It is during this phase that the old "study it, practice it and use it" really stands out. A student will study a certain phase of flying, undergo classroom instruction on the subject, then practice the phase in the link trainers. Finally, he will fly an actual hop putting to use what he has just learned—sometimes all in the same day.

Reporting to the Chase Field flight line with approximately 180 hours from basic training, 30 of which are in jets, the advanced student flies seven hops with instructors and 11 solo hops in his first phase of advanced training. Each hop is about an hour and a half long and is flown at altitudes from 10,000 to 35,000 feet.

The student then progresses through formation flying, basic instrument flying, advanced instruments, low altitude flying, gunnery, bombing, tactics and carrier qualification. Highlights of flying at Chase are the first solo in the swept-wing *Cougar*, breaking the sound barrier, cross-country flights, carrier landings and, of course, winning those wings of gold.

BACKING UP the training units are the station's departments of administration, aircraft maintenance, dental, medical, operations, public works, security and supply.

Since the base was reactivated in June 1953, these departments have groomed and shaped the Beeville station from a 1943-vintage temporary construction type base to a forward looking, well kept base. Two new air-conditioned barracks, two new hangars, a new operations building, a new public works building, three new clubs, and a new theatre stand as fresh reminders of the base's spirit of progress.

Living at Corpus Christi

Some 225 Capehart houses for naval personnel are in various stages of construction. The three- and four-bedroom units, when complete, will house Navy families in air-conditioned comfort. Of these units, 17 are located on the base. The re-

mainder are located in the Chase Park addition of Beeville, just five minutes away from the main gate.

Chase Park is contained in an area of slightly more than 63 acres with the homes strategically placed along eight curving drives. There are no dead ends, and access to the area is gained through four streets, entering from three sides of the development. All are so placed as to eliminate major traffic problems at peak hours.

Unlike a great many housing developments, where the buildings resemble a planted corn field, with row after row of identical houses, Chase Park is highlighted with curved drives (longest straight stretch is less than 400 yards), 14 different sets of building plans and five circular terrace drives.

Picture windows, brick veneer construction, central heating and air conditioning, utility rooms, enclosed garages and direct connection to a central television antenna are features of the new homes along with the latest in kitchen equipment and built-in cabinets.

Though reactivated only six years ago, the base and its personnel have from the beginning been made to feel like "homefolks" in Bee County. They took an active part in celebrating the County's 100th birthday last fall and Chase Field families can be found busy in most of Beeville's civic clubs, PTAs, churches and scouting activities. Reflecting this community relationship is the F9F-2 *Panther* jet which stands on the Bee County Courthouse lawn in Beeville. The jet, given to Bee County in 1958 upon the request of county commissioners, stands as "a monument to the Navy in Bee County."

Besides this friendly relationship, Bee County offers Chase Field personnel a variety of recreation. Located on the upper coastal plain of south Texas, 60 miles northwest of Corpus Christi, 95 miles southeast of San Antonio, 140 miles northeast of Laredo on the Mexico border and 180 miles southwest of Houston, the county is surrounded by big city entertainment.

Inside its own 842 square miles Bee County offers a wide variety of hunting opportunities with such game as dove, quail, deer, javelina, coyotes, rabbits, and bobcats.

Salt and fresh water fisherman and duck hunters need travel only 35 miles from the Beeville base to Lake Corpus Christi, 60 miles to the Gulf

JET STUDENT aviators receive all phases of training in swept-wing jet aircraft.

of Mexico or 72 miles to the base's own recreation area at Seadrift, Texas on Nueces Bay. A new addition to the Chase Field Special Service offerings, Seadrift offers hunting, fishing, boating and overnight accommodations at a minimum cost.

On the base, Special Services maintains hobby shops for woodworking, ceramics, leather working, auto repair and electronics. An Olympic size swimming pool, bowling alley, tennis courts and fully equipped gymnasium round out the base's recreation program — a program designed to go hand in hand with Chase Field's busy "study it, practice it, fly it" way of work.

PROUD MOMENT—Student receives wings of gold making him naval aviator.

BEHIND THE SCENES of a take-off a pilot must go through a regular routine which visitors seldom see. *Below:* LTJG D. R. McKee checks his flying gear.

ALOFT AT LAST, pilots soar over ship.

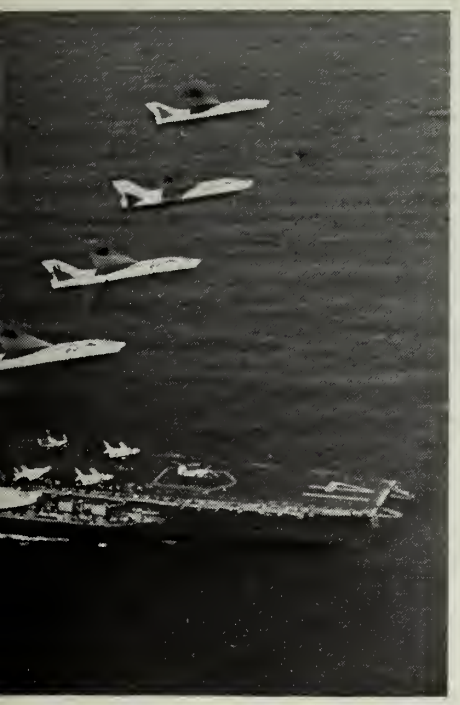
Routine

THE UNINITIATED OBSERVER in "Vultures' Row" on an aircraft carrier may have the idea that flying is mostly a matter of getting into a plane, roaring off on some exciting mission, returning to the carrier and getting out of the plane. However, before and after every flight a Navy jet fighter pilot goes through a regular routine which the visitor seldom sees.

For a glimpse at this behind-the-scenes activity, here are some of the steps the naval aviator goes through in connection with a typical mission. The aviator in this case is LTJG Donald R. McKee, USN, flying from USS *Midway* (CVA 41) with Fighter Squadron 211. His plane is an F8U-1 *Crusader*, a complex multi purpose machine.

Usually, the first thing he does is check and don his flight gear. This includes a protective helmet with oxygen mask attached, a flight jacket, a knee board on which he jots down information, a knife, a .38-caliber pistol and a "G-suit" to protect him from pressure changes at high altitudes. His lifejacket and parachute, which are attached later, remain in the plane.

In the VF-211 ready room, McKee and the other pilots on the mission are given the all-important briefing.



TEAMWORK—Pilot checks over F8U-1 *Crusader* with Plane Captain, N. D. Stone, AD3, USN before take-off.

Before Flight

He makes notes on his mission, weather conditions aloft, communications and navigation data, the location of the nearest land and airfield and all the other bits of information he will need during his sortie. He also swaps notes with his fellow aviators.

On the hangar deck McKee makes a check of his aircraft with plane captain Neil D. Stone, AD3, USN. (An aviator doesn't always fly the same plane, but the plane captain always services the same craft so that he will be completely familiar with it.) After that the jet is loaded on the carrier's forward elevator and raised to the flight deck.

The point at which McKee boards his plane depends on a variety of factors, among them the number of planes being launched and the place on the hangar deck where the plane is spotted. In this particular case, he is in the plane and ready by the time his *Crusader* gets to the flight deck.

There, the *Crusader* is positioned on the 240-foot catapult, McKee signals a "go ahead" and the heavy "*Cru-bird*" is hurled off the deck at a speed of 160 miles per hour by 300 pounds of steam pressure. During these vital split seconds a loss of power would mean an unceremonious dunking and a rescue task for the "angel"—the air group's helicopter hovering nearby.

The plane climbs quickly to 40,000 feet and is soon out of sight.

Time passes, and the planes come back. They circle the "bird farm," awaiting their turns to land.

About five miles from the carrier, McKee "dirties up" his plane (lowers landing gear, flaps and tail hook), and when he gets within range the Landing Safety Officer, LTJG Ray Hubbard, USN, reports "all down."

As McKee approaches, he descends to the 500-foot altitude used in the mirror landing system, and before long he spots the "meatball" of light in the big mirror on the carrier's deck which gives him a visual glide path to follow. If the meatball is too low, he knows he must increase altitude. If it's too high, he knows his plane is above the ideal four-degree glide path.

The jet's approach speed is 145 miles per hour. McKee has the meatball centered, and his tail hook snags arresting cable No. 3 perfectly.

After the plane has slammed to a halt and the hook has been disengaged, McKee taxis his aircraft from the landing area to be spotted on the flight deck. Then a debriefing, on to a hot shower—and maybe a relaxing game of acey-deucy.

FLYER, after flight, reports on plane's operation and his sortie. *Below:* Mission info is checked on briefing board.

'CAT SHOT'

You press your head back hard against the pad as the whine of the jet engine roars into your ears.

The catapult officer drops to one knee and gives the "Fire" signal—and then it hits you.

Your breath is sucked out as the catwalks streak by in a grey blur. The sling propels you off the deck.

You bank the jet fighter away from the carrier dropping far behind in the turbulent jet-wash.

That, in a few words, is what it is like to be catapulted from a carrier deck in a jet. The "cat shot" from a dead stop to a speed of 150 mph in less than 200 feet is a thrill experienced only by carrier pilots.

NOW YOUR JET fighter is waiting aboard the attack aircraft carrier USS *Randolph* (CVA-15).

The swept-wing plane is spotted on the port side of the flight deck, aft of Number Two elevator. The engine is running, preliminary items on the check list are OK, and you have been securely strapped in by

Demo Pilots Ready Men of BTG-5 for First Landings

Today's Navy is built around a fast striking force, the nucleus of which is the aircraft carrier. The carrier can launch aircraft almost anywhere and then retire somewhere over the horizon to await their return.

The pilots of these planes have learned their job well. One vital part of their job—landing aboard the parent carrier—was probably learned at NAAS Saufley Field.

Carrier qualification (CQ) training is the mission of Saufley's Basic Training Group Five. Seventy-five T-28 "tail-hook" aircraft are used for the training. All instruction in this phase of basic flight training is conducted either at Saufley, at nearby Bronson Field, or aboard the aircraft carrier USS *Antietam* (CVS 36).

To acquire the skill necessary to make a good carrier landing is not easy. Many tedious hours of practice on the field are essential to establish correct procedures.

Students in BTG-5 learn from two different "breeds" of instructors. One is a "demo" or demonstration pilot who teaches the student to fly his aircraft at low air speeds and to make the proper approach to the landing strip. The other instructor stays on the ground and schools the student on his approaches and landings. This man, the LSO (landing signal officer), communicates with the student by signaling with paddles.

CQ training consists of 14 flights. On his first hop, the BTG-5 student finds the Demo pilot in the rear seat of the T-28 instructing him on slow-flight characteristics of the aircraft. On the second flight, he flies solo and further familiarizes himself with slow-flight procedures. The third time out, the Demo instructs him on landing at slow speeds.

The next 10 hops are devoted to Field Carrier Landing Practice. Before the student can ever hope to whip a CQ landing, however, he must first master the LSO's hand signals. The eight basic signals are repeated over and over until the student recognizes a signal faster than he would his own name. He must instantly be able to distinguish between a "cut" and a "wave-off" and must be prompt to recognize the "too slow" signal.

Most CQ flying is below 200 feet and at speeds near a stall. The low altitudes and slow air speeds are necessary to simulate conditions for a carrier landing.

The bus with BTG-5 students aboard arrives at Bronson Field about 0630. After instructor's briefing, the students are aloft for either dual or solo instruction.

If dual instruction is scheduled, the Demo pilot usually makes the first two touch-and-go landings. Then he assists the student on the next two. On another four, the student probably executes the maneuver himself.

If solo flying is the order of the day, five students are briefed by their LSO instructor. They then go to their planes and take off. The LSO takes his position at the end of the runway. He waves them one by one through their touch-and-goes. During the 10 solo FCLP hops, the average student makes 70 landings and takes countless wave-offs from the LSO instructor.

Most flying for BTG-5 students is done in the early morning or late afternoon. Turbulent winds near the ground during the hot

the plane captain. The folded wings flutter slightly as the jury struts are removed and the wind tests their strength.

The plane captain removes the tie-downs as you push down hard with your toes to hold both brakes until the yellow-shirted plane director gives the signal to taxi forward. Release the brakes, add power with the throttle and your plane begins to advance. Pressure on the left brake eases the nose to port.

Out in front the director signals "spread wings." You reach down and throw the lever to the "spread" position, lock the wings, move the flap lever to the down position and go over the take-off check list.

The wind has picked up and is whistling across the deck at 35 knots. More power is required to taxi up the deck in single file with other jets from your squadron as the carrier heels over and begins turning into the wind.

You are at the "Y"—the center of the flight deck where the jets split their single file in two, roaring over to the starboard and port catapults.

OFF WE GO—Steam catapult blasts pilot and plane skyward with a mighty roar as an F8U-1 *Crusader* takes to the air on a morning mission at sea.

The director motions you to "Leaping Lena," the port cat.

Hold the right brake and pivot around to line up with the catapult.

Position is good—the director motions you ahead slowly and you inch forward until you are jerked to a stop by the taut hold-back line.

The yellow shirt signals "off brakes" and your heels drop to the cockpit floor clear of the brake pedals. You move the stick back and forth in a last-minute check of flight controls. As you glance over your shoulder the ailerons and elevators waggle back obediently.

Yellow shirt passes the lead to the catapult officer who gives the two-finger turnup signal. Push the throttle forward and clamp your hand around the catapult grip to prevent the throttle from slipping back during the launch. The engine winds up and stabilizes at full power and its screaming roar rushes through your crash helmet. A quick glance at the instruments (oil pressure and tail pipe temperature OK) and you are ready to go.

You salute the catapult officer—your signal that all is set. Rest your right elbow in your lap, keep it poised with stick neutral until after the acceleration period. . . . the plane is trimmed for level flight at take-off speed. A few swift seconds after you salute, the cat officer drops to one knee and points his arm toward the bow of the ship. That is the FIRE signal.

Within a second or so the power of the catapult hits you, causing the plane to shudder and pushing your head farther back into the headrest

The plane hurtles forward as the sling propels you along the track and then the wheels clear the forward deck edge. Grasp the control stick and take her away.

Reach with your left hand and flick the landing gear lever and watch the wheel position indicators point "up." Ease the stick to the left and the plane banks into a climbing turn away from the carrier's bow.

That was your cat shot—over in seconds but a thrill you'll never forget.

—Lt. John E. Draim, USN
As told to Charles Wright.

ALL STEAMED UP—Steam rises as a *Fury* gets set for a 'cat shot' from flight deck of *USS Forrestal* (CVA 59).

Aboard Carrier

middle of the day makes flying at 78-80 knots dangerous.

After BTG-5 students have proved themselves able to make a perfect simulated landing at Bronson, they are ready for the carrier. The LSO takes the lead T-28. His five students follow in their planes. When they arrive over *Antietam* in the Gulf of Mexico, the LSO leads his flight through two touch-and-goes. Then he takes them in for six arrested landings.

The T-28s come in low and slow, just 15 feet above the deck at 78 knots. When the signal is given by the LSO on the carrier, the student cuts his engine and the four-ton aircraft drops to the deck. The low-hanging tail hook catches the arresting wire stretched across the flight deck and the plane is brought to a halt. The student is qualified when six satisfactory arrested landings have been made on the carrier.

BTG-5 currently has a student input of 30-35 students per week. It has 22 LSO instructors and eight Demo pilots. These men do a job unique in aviation. No other U.S. military service duplicates it.

—Bill Manlove, JO2, USN

AIR CONTROLMAN

"Moffett Tower—This is Papa Alfa too ze-ro thuh-ree, initial for landing. Over!"

"Papa Alfa too ze-ro thuh-ree, call over break for course thuh-ree too, Moffett altimeter thuh-ree ze-ro point too ze-ro. Over!"

"Moffett Tower—Papa Alfa too ze-ro thuh-ree, Roger, out."

"Moffett Tower—Papa Alfa too ze-ro thuh-ree at the break, over."

"Papa Alfa too ze-ro thuh-ree cleared to break. Call turning base, over."

"Moffett Tower—Papa Alfa too ze-ro thuh-ree at turning base. Gear is green, over."

"Papa Alfa too ze-ro thuh-ree cleared to land. Out!"

THIS STRANGE LINGO is not between two mixed-up bee-bops transmitting on the wrong frequency—it's the common everyday spoken language of the flying Navy. The conversation quoted above was between the pilot of a P2V coming in for a landing and the enlisted control tower operator at NAS Moffet Field, Calif. It could be any air station.

During normal flight operations, landings and take-offs are the most critical moments. Seldom does the pilot accomplish these tasks by himself. It is not enough for him to know how to operate his controls—he must also know that the field and its approaches *are clear* of other planes.

And the people whom a Navy pilot must depend upon for this vital information are the enlisted control tower operators. They are the highly trained men and women of the Air Controlman rating. There are about 3700 ACs in the Navy today—about 800 of them strikers and 50 Waves.

You'll find ACs directing air traffic from the control tower at Moffet Field, or for that matter at any of the Navy's other air stations, auxiliary air stations, air facilities, seadromes, or aboard aircraft carriers at sea, and as aircrewmen flying with Airborne Early Warning (AEW) squadrons.

As with a number of other ratings, the AC rating is also divided into service ratings which stress specialization in the lower pay grades. These service ratings—limited to strikers and rated men in pay grades E-4 and E-5—include ACW (air controlman, airborne CIC operator), ACT (air controlman, tower),and ACR (air controlman, radar).

The Navy has about 900 ACWs on active duty. They are generally assigned to aircrewman billets with AEW squadrons where they perform duties involving the control of aircraft in flight and other duties in connection with airborne CIC. In addition to these ACWs, a proportionate number of AC1s and ACCs are also assigned to these airborne CIC billets.

AIR CONTROLMAN passes instructions to pilot from tower at Ellyson Field.

RESPONSIBLE for the operation of the Navy's many control towers are some 1000 ACTs and a number of supervisory AC1s and ACCs. When not based ashore, ACTs are normally assigned to sea duty aboard aircraft carriers. Practically all of the active carriers have an allowance for air controlmen. Most of them have one ACT2 and two ACT3s aboard, and four other ACs (an ACC, AC1, ACR2 and ACR3) assigned to its Carrier Control Approach (CCA) team.

The ACs and ACRs assigned to CCA teams perform the same functions aboard an aircraft carrier as a Ground Controlled Approach (GCA) team would ashore. The carrier-based ACTs usually work in flight control or serve as talkers—transmitting oral instructions over the loud speaker or voice radio—for the air officer or landing signal officer.

The Chief of Naval Personnel controls both the sea and shore assignments for the 200 ACRs and the chief and first class ACs serving with CCA, RATCC (Radar Air Traffic Control Center), GCA, and ASR (Air Surveillance Radar) teams.

All other personnel in both the general and service AC ratings are rotated under normal Seavey/Shorvey procedures. On the average, all ACs serve about two years at sea and three years ashore. For the ACs serving in overseas billets, the length of duty tours depend upon their dependency status and areas assigned.

Since there are no established shore duty billets for ACWs—the CIC operators—they are usually as-

signed to special cross-training at the Class "A" Air Controlman Tower School at Olathe, Kans., upon completion of a tour of sea duty. When this schooling is completed the ACWs are then assigned to an authorized air controlman billet for a normal tour of shore duty.

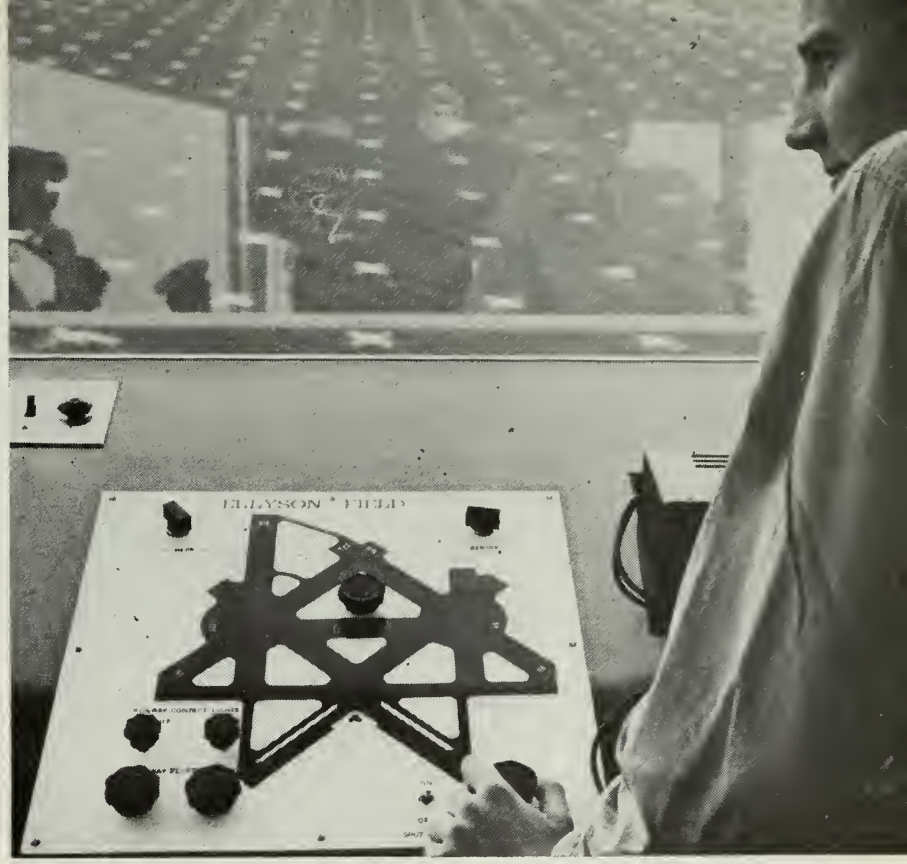
THE GENERAL RATING ACs (pay grades E-6 through E-9) have to be qualified in the over-all aspects of the air controlman rating. To meet this requirement a number of AC1s and ACCs are being assigned (if eligible) to schools for additional training. They normally receive this instruction when in the process of being transferred upon completion of a normal tour of sea or shore duty.

In general, air controlmen learn the duties of their rating through on-the-job training or at one of the AC schools. The basic Class "A" Air Controlman Tower School is located at NATECHTRAU, NAS Olathe, Kans. In order to attend this 10-week school you must meet the physical requirements for an AC as set forth in the *Manual of the Medical Department* (BuMed Manual); have a clear speaking voice, normal color perception, a combined GCT and ARI score of 110 and have 24 months of obligated service.

The Class "A" Air Controlman W (airborne CIC operator) School is located at NAS Glynco, Brunswick, Ga. In order to attend this 12-week course, candidates must have a combined GCT-ARI score of 110. They must possess the physical requirements as set forth in the BuMed Manual for Combat Aircrewman candidates (Airborne Intercept Operator, Radar) and be motivated toward duty involving flying. ACW "A" school candidates must have no speech impediments, normal color perception, have a confidential clearance and 24 months' obligated service.

In addition to these two Class "A" schools, the Navy also maintains a 12-week Class "B" Air Controlman School at Olathe. This school is designed to provide the AC service rating personnel in pay grade E-5, and general ratings ACIs and above, with the theoretical, practical and comprehensive knowledge necessary to perform the more responsible and over-all duties of the general AC rating.

Entrance requirements for the AC "B" school call for trainees to be either general or service ACs in pay grade E-5 or above, and have 18 months of obligated service.



TOWER MAN—ACs operate traffic control lights when directing air traffic.

Waves are eligible to attend both the ACT "A" and the AC "B" schools.

ACs in pay grade E-4 or above with six months' control tower experience are also eligible to attend the six-week Ground Controlled Approach Course. This school, which also trains ETs and ENs for GCA duties, is located at NAS Olathe.

LET'S LOOK a bit more closely into the over-all duties and responsibilities of the general rating air controlman:

When assigned to a control tower and actually engaged in directing air traffic, the enlisted air controlmen are responsible for the safe, orderly and expeditious movement of all aircraft within the vicinity of their seadrome or air station. As you can plainly see, this is a very demanding assignment and one that must be done with perfection.

It is the air controlman who tells pilots when to take off or land, and controls the movement of all ground traffic. In so doing, it is his job to prevent collisions in the air and in the landing and take-off areas. He also assists pilots by providing such advice and information as may be useful for the safe and efficient conduct of their flights.

And if the need arises, it is the air controlman who—in an emergency—flashes an immediate warning to planes in flight. He also notifies appropriate organizations regarding aircraft known to be, or believed to be, in need of search and rescue aid, and assists them as required.

In order to do all this, air controlmen must have a commanding knowledge of radio, radar, flashing light signals, flag hoists, aerology, navigation; and, of course, the necessary flight clerical work and the contents of countless publications. His base of operations usually is in the traffic control tower, the air operations office or in flight control aboard an aircraft carrier.

IN THE CONTROL TOWER, as mentioned earlier, the AC is responsible for the issuance of clearances and information to pilots of aircraft. Foremost among the reasons for instructions and information from the tower is that of preventing collisions between aircraft in the traffic pattern, planes landing and taking off at the landing area, aircraft and vehicles operating on the landing area.

OVER LAND—F8U-1 jet *Crusader* circles NAS Moffett Field, Calif., as pilot prepares to land. All pilots receive landing clearance from control tower.

Another responsibility of the control tower is that of issuing and relaying information and clearances. Such instructions are essential for the prevention of unnecessary delays to aircraft using a landing area, and also to permit aircraft to use the landing area properly.

In clear weather, which in aeronautical lingo is called "VFR" (for Visual Flight Rule) weather conditions, the pilot is more or less on his own when it comes to avoiding collisions with other aircraft. During VFR, information and clearances from the air controlman are intended merely to aid pilots.

When it comes to flying in bad weather or "IFR" (Instrument Flight Rule) weather conditions, the pilot is utterly dependent on the tower for information as to the whereabouts of other aircraft. Therefore, it is of utmost importance that all clearances issued by the air controlman to pilots be concise, definite and complete. In other words, the AC must know what he's doing and he must do it right the first time. There's never any margin for error.

THE MOST IMPORTANT single factor affecting the flow of air traffic is weather. Thus, in order to discharge his daily duties, the air controlman must know aerology—the science of weather. He is required to know how to operate various instruments to "measure weather," as well as master the codes and symbols used in weather reports. All this is essential for flight planning since the AC must give particular attention to winds aloft, surface winds, icing conditions, rough air, fog, air pressure and temperature. He must be able to weigh and interpret all of this information in order to pass accurate weather data to the pilots.

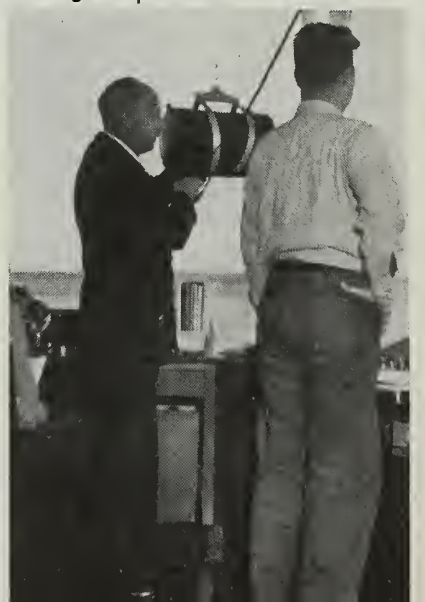
And the methods used in passing weather information to pilots lead into communication procedures—one of the most vital functions of the many which air controlmen perform. They must know both visual and oral communications. This takes in semaphore, flags, pennants, flaghoists, flashing lights such as beacon signals and portable traffic light signals; warning and acknowledgment signals, radio and telephone (landlines), radiotelephone transmissions, local and longline interphone systems, teletype, relaying of message, guarding frequencies and equipment checks.

When it comes to using all these different types of communications procedures it is essential for the air controlman to use the proper phraseology. In addition to knowing the accepted terms which are marked for their simplicity and clarity, the AC must be able to speak without accent or impediment of speech. You can imagine the results of a stammering voice attempting to direct airport traffic in an emergency when clear and precise speech is required.

NOT ONLY MUST the AC be able to speak properly and clearly, but he must also be able to see and hear without any difficulty. The observance of "everything that takes place within sight or hearing" is one of the General Orders—and is also at the top of the air controlman's "must" list. The AC, as a practical part of his work, must be able to recognize all types of aircraft. For the AC, however, recognition is not limited to the mere identification of the plane sighted. He is required to know at a glance the type of plane, its manufacturer, popular name and performance characteristics.

In order the better to understand the problems and situations of pilots of aircraft, the air controlman must know the principles of basic air navigation. Chart reading, plotting sheets, projections, dead reckoning, wind vector diagrams, computers, and the basic principles of instrument flying are some of the everyday tools of

FLASHY—Air controlman (right) flashes message to pilot. *Left:* Grid checked.



navigation which the AC must use.

The intricacies of radio navigation are no mystery to the AC as his routine duties call for the use of the four-course range, "H" facility, fan-marker, VOR, DME, ADF, ILS, air surveillance radar, VHF, direction finder and loran.

Most of these terms may be vague to you, but to an experienced air controlman they are used regularly as part of their everyday vocabulary. More important than just talking about these facilities, the practical aspects of them is what the AC depends upon so he can direct airport traffic, issue flight plane, and correlate necessary information for aviation activities which he serves.

Air controlmen are required to read charts prepared from aerial photographs, realign a range leg, make airspeed and altitude conversions, plot positions, establish courses and distances, work practical and theoretical navigation problems, solve for estimated time en route and the required ground speeds.

OVER SEA—Pilots of carrier-based planes depend on air controlman to pass the word for landing. Here, A4Ds of VA 34 fly over *USS Saratoga* (CVA 60).

WHEN HANDLING airport traffic, ACs frequently get requests from pilots for a ground control approach (GCA). When such a request is received the air controlman must alert the GCA unit and give information and instructions, especially those pertinent to traffic during the final approach. Since the AC is often called upon to assist in a GCA, he is required to know the types and uses of radio equipment, frequency coverage, unit and channel selection, standard phraseology, the main components of search radar, precision radar, and approach controller positions and duties.

GCA is but one of the many duties the AC may be required to perform. In the control tower, the duty air controlman is usually the traffic control operator. Among his other duties will be the operation of the field lighting system; operation of the directed traffic control light; operation of remote control equipment to prevent failure of aids to navigation; obtaining, adjusting and relaying altimeter settings; keeping of operational and material logs; processing airway clearance forms; and submitting accident and other reports.

When not working in a control tower, the AC is usually assigned to an air operations office.

All rated air controlmen—with the exception of ACWs and those serving aboard ship and at certain overseas stations where it is impracticable to be examined—are required to possess a Federal Aviation Agency Air Traffic Control Tower Operator Certificate.

This means that in order to get rated they must, in addition to passing their regular Navy advancement exams, pass a written examination given by the Federal Aviation Agency. This civilian exam certifies that they understand air traffic rules, airport traffic control, air navigation and procedures and weather observation.

So you see, an air controlman must really know his business.

—H. George Baker, JOC, USN.

HOLD THE PHONE—Highly trained men and women of the AC rating supply pilots with vital flight information.

ALL CLEAR

Initiated by pilot. Touch tip of index finger with tip of thumb. Taxi signalman responds with similar gesture if all is clear.

START ENGINES

Pilot extends number of fingers to indicate engine desired. Signalman responds with similar gesture while rotating other hand in clockwise motion (if all clear).

* REMOVE AUXILIARY POWER PLUG

Initiated by pilot. Extended thumb of right hand touches palm of left hand, then moves suddenly away from palm. Signalman responds with similar gesture.

* REMOVE LANDING GEAR PINS

(Safety Locks)

Initiated by pilot. Fingers of left hand rest on thumb to form ring, right forefinger placed in ring and suddenly withdrawn. Signalman responds with similar gesture.

PULL

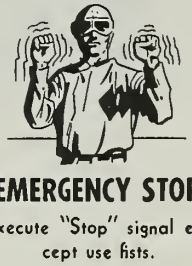
Pilot makes
tion of the
extended ou
man sweeps
hip level w
tended

SLOW DOWN

Hands at waist level, palms down, execute downward patting motion.

STOP

Hands upraised to eye level, elbows flexed and palms toward aircraft as in a policeman's stop.



EMERGENCY STOP

Execute "Stop" signal except use fists.

SIGN LAN
NAVAL AV

These standard aircraft taxi signals were
from material supplied by the
Office of the Chie

*SIGNALS MARKED WITH * ,*

FOLD WINGS

Arms straight out at sides then swept forward and hugged around shoulders.

SPREAD WINGS

Arms hugged around shoulders then swept straight out to sides.

LOWER WING FLAPS

Hands in front, palms together horizontally, then opened from wrists in alligator-mouth fashion.

RAISE WING FLAPS

Hands in front horizontally with palms open from wrists then suddenly closed.

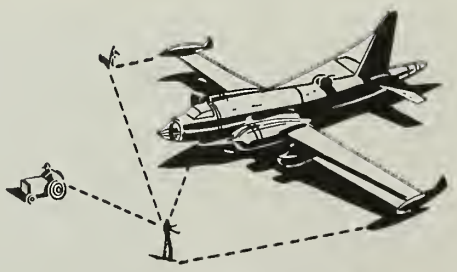
OPEN COWL FLAPS

Hands flat against sides of head, then "opened" by bringing thumbs outward and forward.

* INSTALL LANDING GEAR PINS

(Safety Locks)

Initiated by pilot, Fingers of left hand rest on thumb to form ring, right forefinger suddenly inserted into ring. Signalman responds with similar gesture.



Towing

To direct the towing of an aircraft, the taxi signalman will assume the same position as prescribed above, keeping the eyes of the pilot and the driver of the towing vehicle visible at all times.

When necessary, an additional crewman will be stationed at the right wing tip. This crewman at all times will remain visible to the taxi signalman to whom he will direct all necessary signals.

Night

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THE TAXI SIGNALMAN

The taxi signalman will indicate his readiness to assume guidance of the aircraft by extending both arms at full length above his head, palms facing each other.

IGUAGE

VIATION

ted for use in *ALL HANDS Magazine*
ation Training Division in the
Naval Operations.

NOT MADE WITH WANDS.

COME AHEAD

Hands at eye level, palms toward face. Execute beckoning motion; rapidity of hand motions indicates speed desired of aircraft.

RIGHT TURN

Execute "Come Ahead" signal with right hand while pointing with left hand to the wheel which is to be braked.

LEFT TURN

Execute "Come Ahead" signal with left hand while pointing with right hand to wheel which is to be braked.

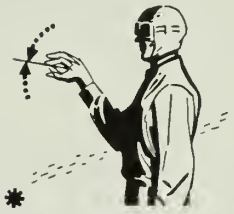
EMERGENCY STOP

Night Operations

"Stop" signal will be made by crossing lighted wands before the face of the taxi signalman.

OPEN SPEED BRAKES

Right hand in front, fingers together, thumb against middle finger, then open the hand suddenly.



CLOSE SPEED BRAKES

Right hand in front, palm cupped with thumb down, tip of thumb and middle finger suddenly brought together.

UNLOCK TAIL WHEEL

Hands together overhead, palms together then opened from the wrists to form a vertical V.

LOCK TAIL WHEEL

Hands together overhead, palms open from the wrist in a vertical V, then suddenly closed.

TURNOVER OF COMMAND

Both hands pointed at next succeeding taxi signalman, one hand extended and the other at chest.

UP HOOK

Right fist, thumb extended upward, raised suddenly to meet horizontal palm of left hand.

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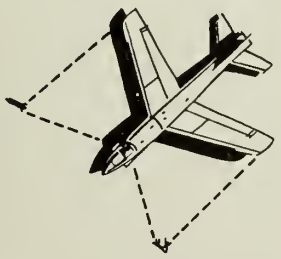


Helicopter

Stand outside the rotor diameter.

Position of Taxi Signalmen

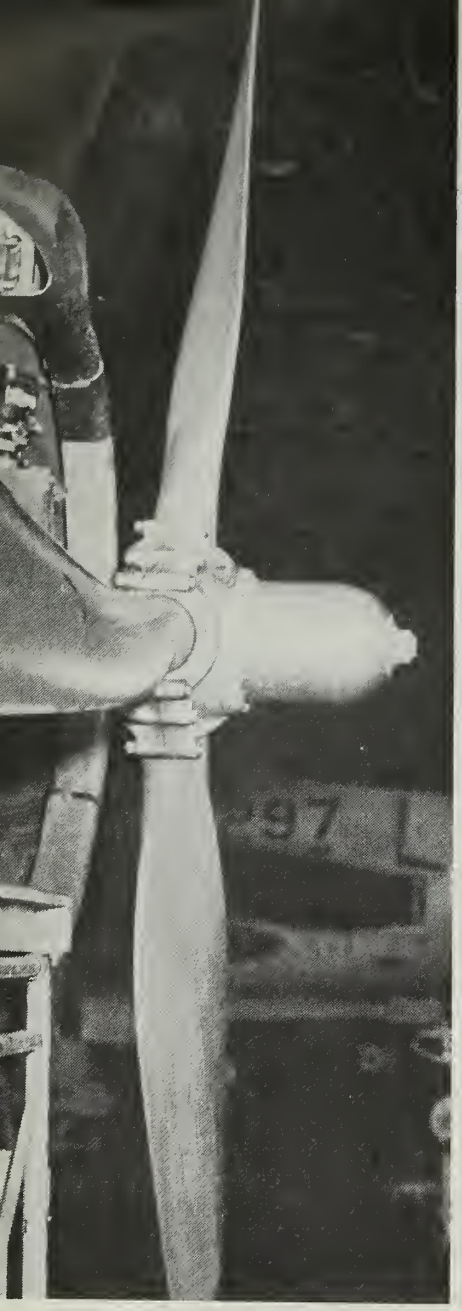
The taxi signalman, when directing the movement of aircraft, at all times will assume and maintain a position from which the eyes of the pilot are visible. The position will be on a line extending directly forward from the left wing tip, except when the assumption of this position is rendered inadvisable by special conditions such as might occur aboard a carrier.

INSERT CHOCKS

Sweeps fists together at hip level with thumbs extended and pointing inward.

CUT ENGINES

Hand drawn across neck in "throat cutting" motion.



TEAMWORK—Prop-driven AJ re-gases fuel-consuming jet while in flight.

Prop Planes Keep Busy

In this age of jet aviation and guided missiles, men's major interests appear to lie in the conquest of space and in speed. But does this make the propeller plane and its pilot obsolete? PACFLT doesn't think so.

In a well knit and logical presentation (we wish we knew who wrote it so we could give proper credit), a ComNavAirPac expert puts forth the argument that neither the jet nor the missile can take the place of the propeller plane in many situations which involve low-altitude flight endurance and small-area operations.

THREE PROPELLER PLANES in Navy use today are used to prop the argument: The S2F *Tracker*, a carrier-based, two-engine plane designed exclusively for ASW operations from carriers; the P5M *Marlin*, a seaplane used for long-range antisubmarine warfare and patrol, with a secondary mission as a mine layer; and the AD *Skyraider*, a low-level attack aircraft.

In antisubmarine warfare a plane with speed is desirable though not essential, but the plane does need the ability to remain airborne within any given area for long periods.

Once the target area is chosen, the basic requirements in ASW are to find the sub, pin him down and destroy him. The *Tracker* and the *Marlin* are both capable of serving this need; however, each is designed to operate in its own fashion. In some cases they complement each other; in others, they work alone.

THE S2F *Tracker*, designed to fly at slow speeds and low altitude, is the Navy's carrier-borne antisubmarine aircraft. Although small enough to be carried aboard an aircraft carrier, the *Tracker* is large enough to carry a load of electronic equipment and the weapons needed to destroy even the most modern submarine.

Its crew searches for lurking submarines visually, through radar, by sonobuoys dropped into the sea to relay tracking information to the plane or by Magnetic Airborne Detection (MAD) gear.

Sensitive radar detects surfaced submarines, snorkeling subs or even periscopes.

MAD pinpoints the submarine by detecting disturbances the underseа craft makes in the magnetic field of the ocean floor.

Sonobuoys designed to hear the pulsing beat of a submarine's propellers are dropped singly or in patterns and immediately begin to transmit what they hear to radio receivers in the aircraft. The S2F's destructive power lies in its rockets, depth charges, or homing torpedoes.

Operating from sea or shore, the P5M *Marlin* is a part of the Navy's antisub team. Although resembling a duck out of water while on the ramp at the seaplane base, in its element the *Marlin* is an effective weapon. Because it is larger than the *Tracker*, the seaplane has triple the cruising range. In addition, the seaplane can be based wherever there is reasonably sheltered water. Coordinating its operations with seaplane tenders for repairs and refueling helps make it even more versatile. The P5M carries a normal crew

PROPS HELP planes like S2F *Tracker* and AD *Skyraider* perform their mission.

MARLIN'S props give greater range.

in Jet Age

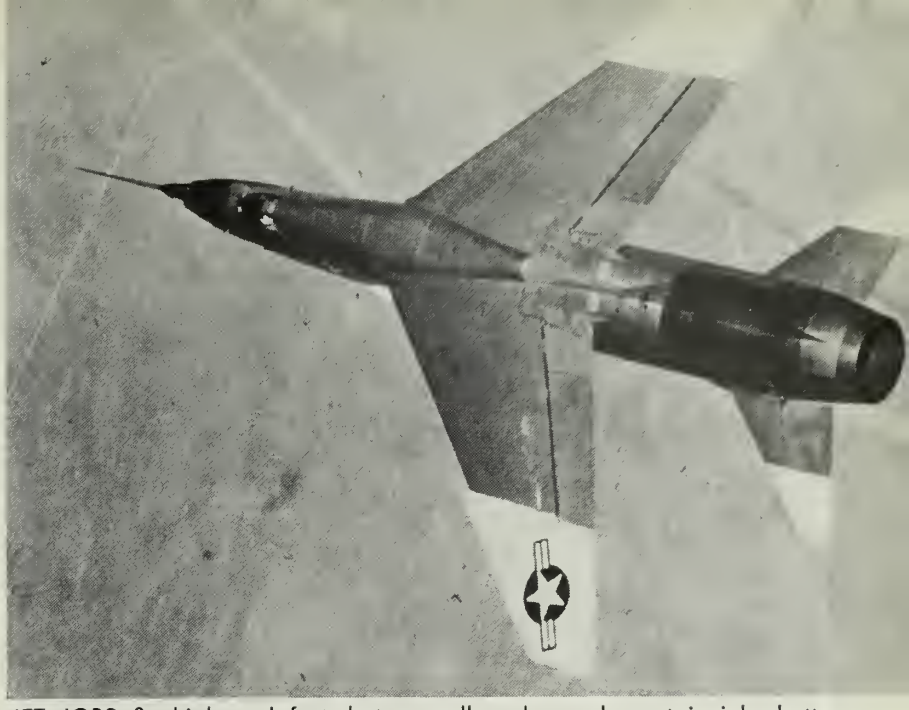
of three pilots, a navigator and eight crewmen. Carrying much the same equipment as the S2F it, too, tracks the enemy sub with sonobuoys, magnetic detection gear or by radar until it is in position for the kill.

The *Skyraider* is a single-engine all-weather, carrier-based attack aircraft. Over 2000 various configurations of seven models have seen carrier service since 1948.

The biggest asset of the "Able Dog" (it dates back to the old phonetic alphabet) is its capability of carrying heavy loads over long distances, its payload sometimes weighing more than the plane itself. This, together with the low-altitude fuel economy not possible in jets, makes the *Skyraider* a valuable aircraft for air support of ground troops. Korea's rugged terrain and comparative brush—war type tactics proved to be a natural for the maneuverability and accuracy provided by the AD.

Since ADs are capable of carrying a heavy load, the Navy is now converting them into "buddy-system" refueling planes. This operation is designed to provide inflight refueling to jet aircraft. Usually a returning jet is necessarily low on fuel and if its floating airbase suddenly confuses the issue with a fouled flight deck the plane might have to be ditched. With the buddy system, the long winded AD, with its large payload capacity, is loaded with fuel, takes off from the carrier and circles overhead and if necessary this flying gas station can replenish the fuel tanks of the thirsty jets.

The inflight refueling system is also used to extend the combat range of jets. The fuel-laden AD is launched in advance of the jets, flies to its highest altitude to rendezvous with jet planes after their gas-gulping climb to their own particular element, the upper atmosphere. This operation increases the jet's range by many hundreds of miles.

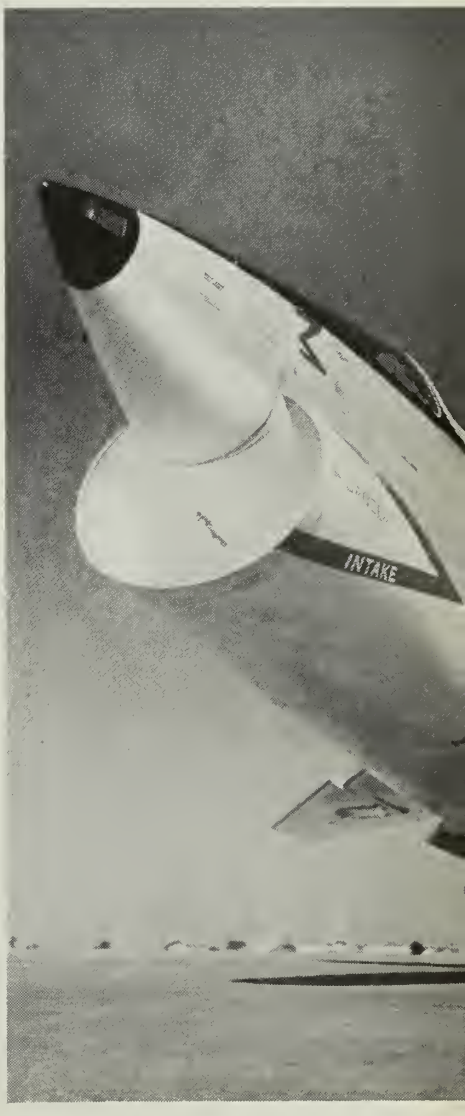


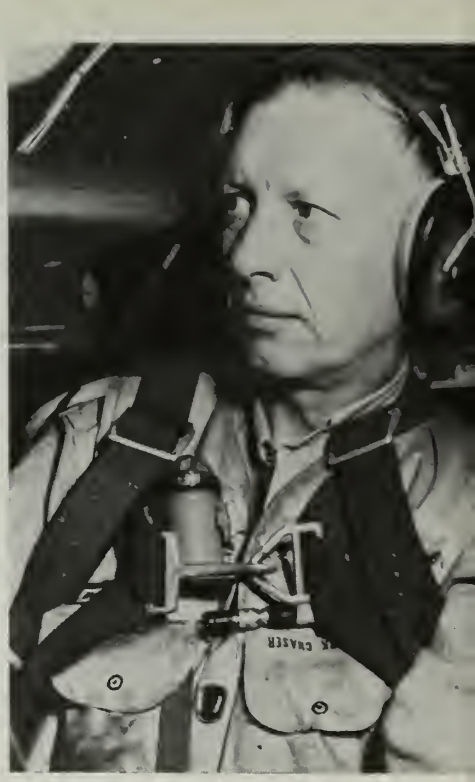
JET JOBS fly high and fast, but propeller planes do certain jobs better.

OTHER MODELS of the *Skyraider* have traded armament for electronic and early warning radar. Using its great fuel tanks to obtain extra staying power, the plane then becomes a long-range sentinel to the Fleet. Because of the odd shape of the electronic gear, this type of AD is known as the "Guppy." Flying miles in advance of the Fleet, the AD is able to detect radar beams from enemy sources or, by its own radar, can warn the task force of approaching enemy planes or ships.

The *Skyraider* is also highly respected throughout the Fleet for its ability to carry atomic weapons. Because of its long-legged, low-altitude capabilities in carrying its weapons to enemy positions, the AD actually cruises below the average radar pickup range. Should an opposing jet interceptor spot one of these slower low-flying planes from above, the prop-driven aircraft still has an excellent chance to complete its mission. The jet, in coming down to the AD's own altitude and speed, would then be in the AD's element, giving the prop plane an equal chance for survival through its greater maneuverability, difference in air speed and its longer endurance at low altitude.

The planes mentioned above are only three among the Navy's propeller aircraft. They are representative of the many vital assignments no other plane can handle as effectively as the propeller plane.





THE HUNT—Air Reservists on *Operation Skynet* joined Fleet in ASW hunt. *Rt:* Reserve radar operator watches scope.

Operation Skynet

A RADAR OPERATOR, flying in a P2V-5F *Neptune*, detects a small, unidentified surface contact on his search radar.

The skipper of the patrol bomber alters his course to close the range and make all preparations for an attack. Simultaneously, the task group commander is notified of the contact. The *Neptune* rapidly closes to visual range, determines that the target is an enemy submarine running on the surface, and attacks.

The submarine dives. Contact is lost. Now the aircraft returns to its attacking point and conducts a Magnetic Airborne Detector (MAD) investigation to regain contact. A pattern of sonar-equipped buoys is used to track the submerged submarine.

A helicopter arrives at the target location, lowers a sound head, and is coached onto the target by the tracking patrol plane. Destroyers arrive on the scene and are directed to the target by the whirlybird. The DDs begin a series of coordinated multi-ship attacks.

Before long the task group commander receives a report from the attacking group: "Mission accomplished. A kill."

This is ASW.

And one more interesting point. The plane crew was made up entirely of Reservists, and the plane was assigned for Naval Air Reserve training.

A FEW WEEKS AGO, Naval Air Reserve ASW squadrons took part in the First Fleet's training exercise, *Operation Skynet*. The exercise included flight missions similar to the one described above.

During *Skynet*, Pacific forces—

NAVAL AIR RESERVE ASW squadrons showed plenty of know-how in tracking down and killing 'enemy' submarines.

including hunter-killer air and surface units—sought to prevent enemy penetration of a seaward barrier of more than 600 miles in depth. Navy submarines posed as enemy undersea forces attempting to break through the barrier.

Reservists from air stations at Oakland, Los Alamitos and Long Beach, Calif., Glenview, Ill., New Orleans, La., Minneapolis, Minn., and Seattle, Wash., joined forces for the exercise. Together, they maintained 24-hour patrols and flew around the clock in shifts of up to 13 hours' duration. When they weren't actually in the air, attempting to seek and destroy "enemy" submarines, the "Weekend Warriors" were on standby crew status or catching up on needed sleep. A detachment of Reserve mechanics and technicians supported the ASW aircraft.

The operation marked the first time that Air Reservists took part in full-scale peacetime Fleet maneuvers on equal footing with active duty sailors and aviators.

How did the Reservists fare? The message sent to the Chief of Naval Air Reserve Training by Commander Fleet Air Wing Fourteen is a good indication:

IN DEMANDING ALL WEATHER CONTINUOUS AIR OPERATIONS, I HAD MY RESERVATIONS ABOUT RESERVE CAPABILITY. THE WAY THOSE TIGERS TORE INTO THE PROBLEM, THEIR VERY REAL ENTHUSIASM, THE PROFESSIONALLY COMPETENT OPERATION OF THEIR COMPLEX ANTISUBMARINE WARFARE EQUIPMENT, AND THEIR WONDERFUL CREW TEAMWORK ARE LARGELY RESPONSIBLE FOR THE LION'S SHARE OF CREDIT FOR OUR VERY SUBSTANTIAL SUCCESS. PLEASE PASS TO PARTICIPATING RESERVE SQUADRONS AND STATIONS MY WELL DONE, THANKS, AND COME AGAIN.

In keeping with the Navy's gradual change in emphasis toward ASW, the Naval Air Reserve has undergone a considerable transition from fighter and attack squadrons to ASW squadrons—a transition which has been in process for several years. Some squadrons have been decommissioned, some have been redesignated, and a number of new squadrons have been commissioned.

LAST YEAR, the entire Naval Air Reserve program became part of the Selected Reserve. The Naval Air Reserve now consists of three Selected Reserve Components:

- ASW Component (Air), which

RESERVE CREWMEN work behind scenes to keep their planes on the prowl. *Above:* AO installs practice depth bomb. *Below:* Plane's wiring is checked.

HERE'S HOW—VS Crew 16 gets word on ASW mission. *Rt:* Reserve helicopter pilots compare notes on kill.

includes 58 VS (Carrier Antisubmarine) squadrons, 73 VP (Patrol) squadrons, 18 HS (Helicopter Antisubmarine) squadrons, and three ZP (Lighter Than Air) squadrons;

• Active Fleet Augmentation Component, which includes 22 Air Wing Staffs and 25 VF (Fighter) squadrons, 27 VA (Attack) squadrons, 70 VR (Fleet Tactical Support) squadrons, 12 HU (Helicopter Utility) squadrons, 20 CV FASRONS (Fleet Aircraft Service — Carrier) squadrons, 20 VP FASRONS (Fleet Aircraft Service—Patrol) squadrons, and 44 Air Intelligence Reserve Training Units (AIRTUS).

• Shore Establishment Component, which includes 30 Bureau of Aeronautics Training Units (BARTUS).

Members of the Selected Air Reserve have pre-cut mobilization orders, and are available—with the aircraft of the Naval Air Reserve Training Command—to join the active Fleet immediately.

THE "WEEKEND WARRIORS" take part in regular drills in their assigned aircraft. Annual active duty for training (AcDuTra) is performed under the appropriate Fleet commanders.

Air Reserve ASW squadrons have been flying weekend antisubmarine barrier patrols for many months, gaining valuable experience by complementing the regular Fleet patrols.

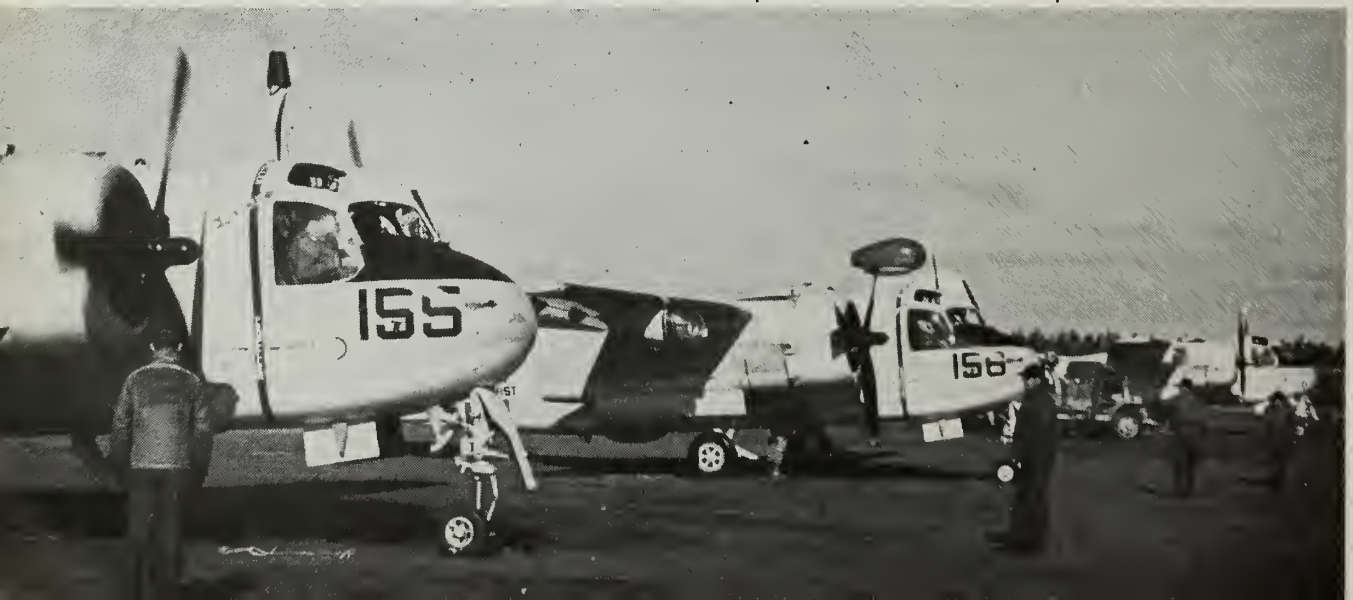
Regular drills also include coordinated training exercises with Fleet and Reserve surface and submarine units. Although carried out on a much lesser scale than the far-flung *Skynet* maneuver, these exercises have the same goal—detection, location and destruction of "enemy" subs.

Not all training is conducted Stateside. Many Air Reserve VP and VR squadrons are deployed to the Mediterranean, for example, for AcDuTra with the Sixth Fleet.

More than eight years have gone by since the first Naval Air Reservists to see air combat since World War II launched air strikes from USS *Boxer* (CVS 21) during the Korean conflict. At that time, upon relinquishing command of the Air Force, Pacific Fleet, VADM T. L. Sprague, USN, reported an interesting fact: "One-third of the Navy's air offensive in Korea has been accomplished by Reserve squadrons; fighting units ordered to duty intact from their home stations. This . . . has clearly demonstrated that the Naval Air Reserve Program is the only effective and economical way to maintain a high standard of preparedness."

Judging from the results of current training programs, our "Weekend Warriors" of today are equally ready for any emergency.

READY TO GO—Pilots and crewmen of Weekend Warrior Squadron VS 752 man their planes to start sub search.



JUST IN CASE—Crash crew stands by during operations. Safety precautions are emphasized in flight and on ground.

Standing Guard

BECAUSE OF EXTENSIVE safety precautions, it's assumed that each training flight at Pensacola will be made without incident—or accident. But just in case something goes wrong, the crash crew is always standing by.

The Pensacola crash crew now stands at about 50 men, on port and starboard watches. Section leaders are H. L. Darby, AB1, and J. L. Aldridge, AM1. H. E. Lester, ABC, is chief-in-charge of all crash crewmen.

The crew is equipped with two major pieces of equipment. Resembling a red, mechanical elephant, the MB-1 has a capability of dispersing more than 12,000 gallons of foam in three minutes as it moves in close and covers a flaming plane with foam, smothering out the fire.

The "cherry-picker" is a 50-ton crane that can lift a plane from a canyon or carry it through waist-deep mud with ease. The Picker is also used to turn over the aircraft if a flyer is pinned underneath.

SCRAMBLE—Crash crew dashes for vehicles during drill. Above: Plane makes safe landing as crash crew watches.

THE ASTRONAUTS: MEN

CALL HIM WHAT you like, astronaut or just plain spaceman, but he may be a Navyman and one of the first to orbit the earth in a man-made satellite.

Of seven military test pilots selected by NASA (National Aeronautics and Space Administration) for Project *Mercury*, three are naval aviators, one a Marine Corps aviator, and three Air Force pilots.

The team of spacemen, one of whom will be picked to make the pioneer venture in manned space flight in about two years, consists of: LT Malcolm S. Carpenter, USN, age 34, from the aircraft carrier USS *Hornet* (CVS 12); LCDR Walter M. Schirra, Jr., USN, 36, NavAirTestCtr, Patuxent River, Md.; LCDR Alan B. Shepard, Jr., USN, 35, Staff, CinCLant; LT COL John H. Glenn, Jr., USMC, 37, BuAer; CAPT Leroy G. Cooper, Jr., USAF, 32, Edwards AFB, Calif.; CAPT Virgil I. Grissom, USAF, 33, Wright-Patterson AFB, Ohio; and CAPT Donald K. Slayton, USAF, 35, Edwards AFB, Calif.

These men, picked from 55 armed forces test pilots, are now at Langley Research Center, Langley AFB, Va., undergoing preliminary man-in-space flight training and instruction.

Only 32 of the 55 men actually underwent the series of tests used to make the final selection. The other 23 were rejected for such reasons as education, motivation, or physical fitness.

The series started at Lovelace Clinic, Albuquerque, N.M., where the candidates were given a physical examination that lasted one full week.

From Albuquerque, the men went to Wright Air Development Center, Dayton, Ohio, where they were put through stress tests developed to simulate actual conditions they might face on their trip to outer space.

They were put in isolation for three hours. Inside the completely soundproof room there was no light —only dead, dark silence—silence like that which they may encounter in space.

They underwent tests of acceleration and deceleration similar to the conditions they may be subjected to when they blast off from the earth and again when they return to the earth's atmosphere. During deceleration tests, the men were subjected to forces as high as 32-G—32 times the force of gravity. An 18-G impact is expected when the satellite returns to the earth's atmosphere.

To simulate the heat they may encounter when the capsule re-enters the earth's atmosphere, the men spent two hours in a chamber heated to 130 degrees Fahrenheit.

In another test, the men were blindfolded and seated in a chair that could be made to tip in any direction. They had to control the chair and keep themselves upright.

To watch their reaction when held in unusual positions, each man was strapped to a tilted table for 25 minutes.

Loud, high frequency noises were blasted at them; their feet were dunked into ice water; and they were asked to take a long walk on a tread mill. As they walked, one end of the machine was elevated one degree a minute.

The ability to think clearly is another requirement of a good spaceman. To test for this, each candidate was seated in front of a board on which were mounted 12 lights. He was instructed to do something different for each light, if it flashed on. The lights were then blinked at ran-

NO SOFT JOB—Prospective Astronauts were extensively tested. Here, LT Carpenter is given heat and tread tests.

OF SPACE

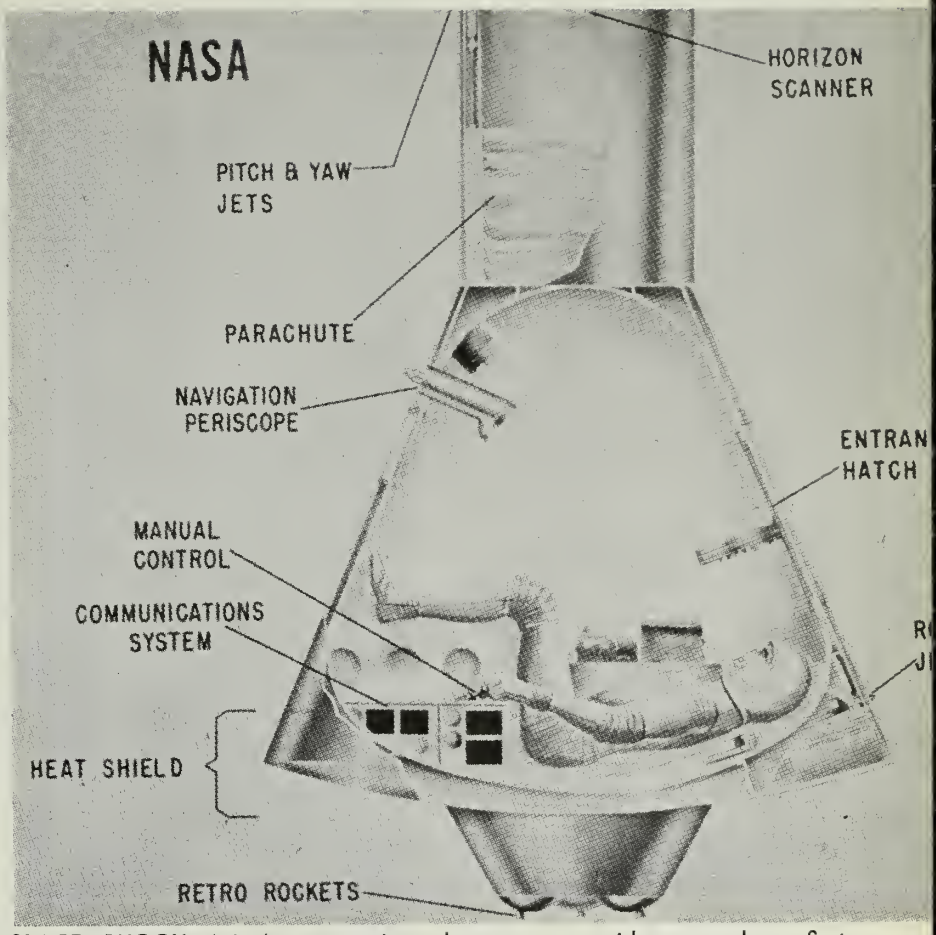
dom to see how he would react to a complicated situation.

Besides these physical tests, the potential spacemen were interviewed for long sessions, and subjected to a series of psychological and mental tests.

Final selection was difficult. All the men were well qualified. Officials said the tests were "the most rigorous ever given to anyone in this country . . . far more stringent than those given to any test pilot in the past." They commented that only "one in a million" could have come through as these seven did.

During the next two years, or until the *Mercury* project is ready, each man will prepare himself for the trip into space. Not one of them will know until a few hours before the flight, which one will be strapped on his back in the business end of a ballistic missile.

The space capsule will orbit at 18,000 mph about 125 miles above the earth two or three times and then drop to earth—probably somewhere over the ocean. Total time away from earth should be only a few hours. During later flights, however, scientists will extend the time to at least 24 hours.



SPACE BUGGY—Aritst's conception shows present ideas on how first manned space satellite will look as it carries an Astronaut to space and back.

If this first manned flight is successful there seems to be no limit to what can be accomplished. Only a few years ago if anyone talked about flights to the moon, permanent laboratories orbiting in space, and trips to other planets, his statements would probably have been dubbed as science fiction. Today it is still science, but it's far from being fiction.

Even the training astronauts receive would have been unheard of a few years ago. During one phase, U.S. Army Redstone ballistic missiles will be used to lob the space candidates some 130 miles down the Atlantic coast from Cape Canaveral, Fla.

The astronauts are eager and confident. They feel sure they will be successfully fired into space and will be returned safely to earth. They say that this trip "is no more dangerous than any other test in a high performance airplane." Their wives feel the same way.

The men even joke about the test. One candidate quipped that it would probably be "the nearest to heaven I'll ever get."

Each of the seven men picked for this "trip" has over 2300 flying hours; they are an average of 34½ years in

OUT OF THIS WORLD—One of these servicemen from Navy or Marine Corps could be picked for first space flight.

A. B. Shepard, Jr., LCDR, USN

M. S. Carpenter, LT, USN

W. M. Schirra, Jr., LCDR, USN

J. H. Glenn, Jr., LTCOL, USA

age; have an average height of 5 feet 9½ inches; and weigh an average of 164 pounds. All of them are married and have children.

Perhaps you've served with one or more of the three naval officers or the marine who are participating in the pioneer spacemen training. For those who haven't, here's a rundown on them:

• LT Malcolm S. Carpenter, who was born in May 1925, has over 2800 flying hours, which includes 300 in jet aircraft. He lives in Garden Grove, Calif., has four children, and was graduated from college with an aeronautical engineering degree in 1949.

• LCDR Walter M. Schirra, Jr., from Hackensack, N. J., was born in March 1923. He has two children. A 1945 graduate of the Naval Academy, he has 3000 hours in the air, of which 1700 have been in jets.

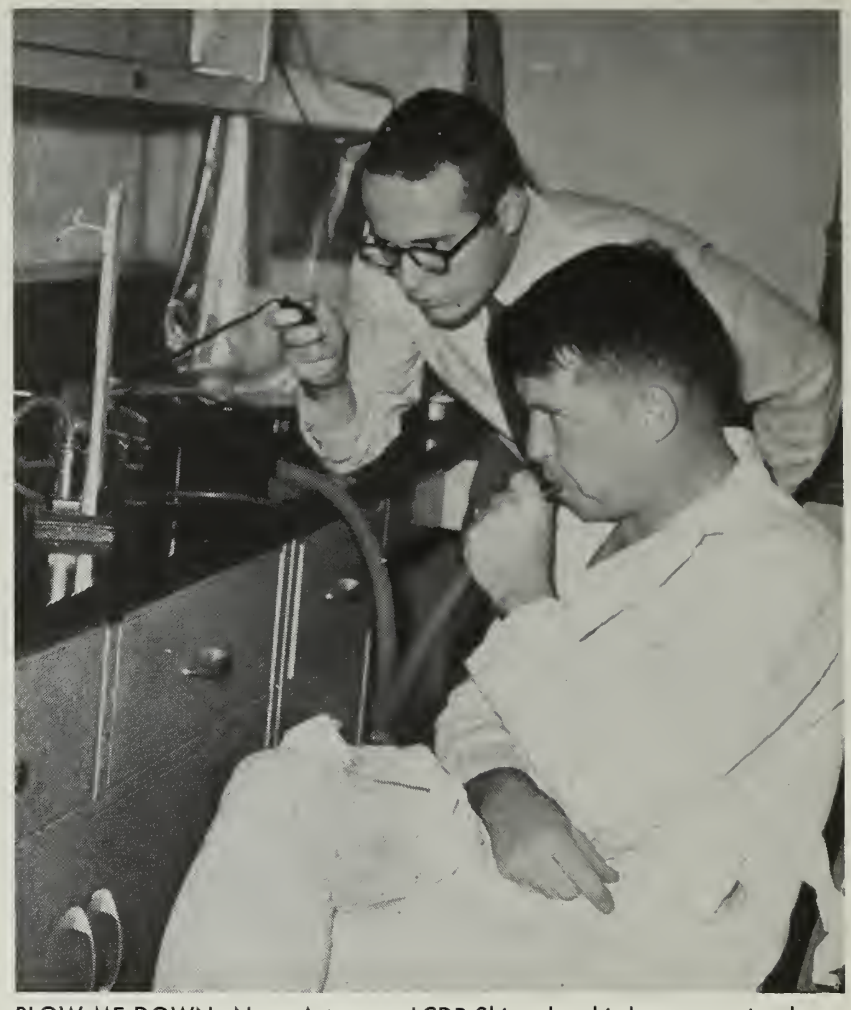
• LCDR Alan B. Shepard, Jr., was born in East Derry, N. H., in November 1923. He has two children, and is a 1944 graduate of the Naval Academy. He has 3600 hours of flying time—1700 in jets. Part of his flying was during high altitude tests to obtain data on light at different altitudes. He also took part in developing the Navy's in-flight refueling system.

• LTCOL John H. Glenn, Jr., who was born in July 1921, flew 59 combat missions during World War II. During the Korean conflict he flew another 63. He has been awarded the distinguished flying cross five times and wears the air medal with 18 clusters. In July 1957 he set a transcontinental speed record of three hours and 23 minutes from Los Angeles to New York.

As you can see, each of the men are outstanding pilots. The average IQ for the group is 135. They drive their own car, they're well-rounded family men, and are careful about their money.

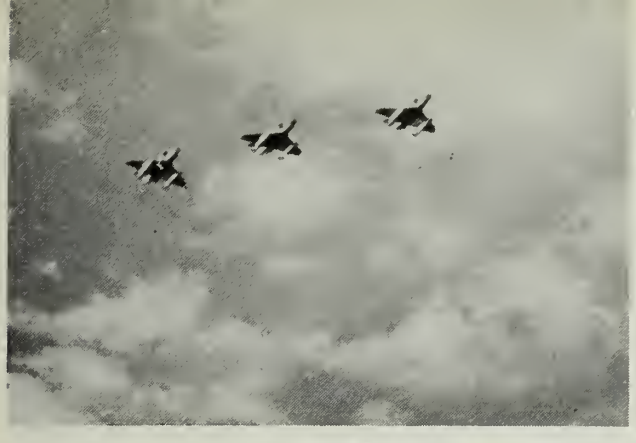
For this job, however, the men had to have just a little something extra—it's going to be a long, tough trip, and also one to remember.

The Navy has always been known for its work on the sea, under the sea, and over the sea. Little did anyone realize when that slogan was coined, however, that the "over the sea" phrase would ever encompass outer space. In this modern Navy, you just never know what's next.



BLOW ME DOWN—Navy Astronaut LCDR Shirra has his lung capacity determined during spaceman tests by blowing nose and blowing through tube.

SEVEN ASTRONAUTS from three military services are greeted by R. R. Gilruth (rt.) Director, NASA Project Mercury.



SEEING IN SPACE

THE GREAT INCREASE in the speed and altitude of today's aircraft continues to create new problems for pilots. One of these is the ability of individual fliers to recognize and track targets with "excessive relative motion." Another problem is detecting aircraft at high altitudes against a background of a uniformly colored sky.

Two Ph.D.'s, Dr. Elek Ludvigh, and Dr. James W. Miller, are currently working with the School of Aviation Medicine at NAS Pensacola, Fla., to find an answer to these problems.

Since July 1958 tests have been conducted in which certain basic characteristics of the eye were examined following moving targets.

The measurement of a person's ability to see an object clearly when that object is moving is called "dynamic visual acuity." (Static visual acuity is determined by using the common eye chart.)

One of the most interesting and significant results of these experiments so far was that Naval Aviation cadets who have the same static acuity (20/20) might have very different *dynamic acuity*. For example, when the test object moves at a given speed, one cadet might have a dynamic acuity of 20/40 and another cadet might have a dynamic acuity of 20/600. These tests have shown that certain pilots might be unsuited for low-altitude high-speed missions where visual navigation is essential.

Recently, 25 men underwent tests in which their visual acuity was measured while flying over targets in an AD-5 aircraft. They flew at 130 to 240 knots and at altitudes from 100 to 400 feet.

Dr. Miller and LTJG J. E. Goodson, MSC, USN, subjected these men to laboratory tests to see if the results would still be the same.

Research in the visual detection of objects against a uniform background has been limited in the past. This has been mainly because of the difficulty of producing a completely uniform field into which test objects could be introduced. Dr. Miller and Dr. Ludvigh, in an effort to overcome this, have devised a clear plexiglas, double-walled cylinder which contains a liquid fogging solution. This helmet-like device is lowered over the head and shoulders of the man being tested. He is then faced with a situation in which he sees nothing other than a uniformly illuminated white background. Under these conditions all sensation of the normal depth of field disappears and after a short period of time he may even begin to have hallucinations.

Both moving and fixed targets of different sizes are then placed at different points in the visual field. These targets may then be moved across the field or remain stationary. The test is to find how long it takes the observer to locate the target and tell both its size and location.

Early results indicate that observers are uncertain whether there is an object present or not, even though the targets may be of substantial size. It has been found that very large targets sometimes seem to disappear while being fixed in the vision of the observer.

There is strong evidence to indicate that the difficulty in locating objects against a field of this kind is caused primarily by "disorientation" of the pilot or an inability to search efficiently.

One report tells of two pilots who, while attempting to rendezvous at a fairly high altitude, failed to see each other in clear weather, even with radar. They returned to base without making visual contact.

Further work along these lines is being carried out at Pensacola.

PILOT'S PROBLEM—Greatly increased speed and altitude of today's planes make it more difficult for pilots to recognize and track their targets.

HOLIDAY ROUTINE—Carriermen take time off for worship as *USS Midway* (CVA 41), left, cruises through Pacific.

Sunday at Sea

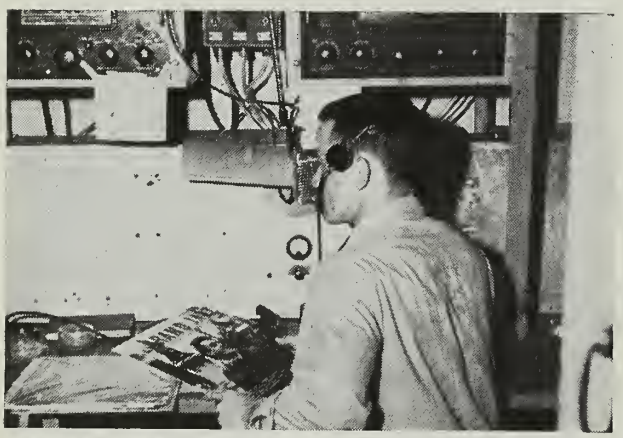
WITH THE PASSING of the word "Holiday Routine" the 3500 Navymen on board the attack aircraft carrier USS *Midway* (CVA 41) prepare for Sunday at sea while their ship makes way through Pacific waters en route to her home port of Alameda, Calif.

Aboard *Midway* this means the crew has a chance to sleep late before arising for a late breakfast in one of the carrier's five galleys. After eating a "home-cooked" meal, they attend divine services of their faith.

For recreation on Sunday afternoon they can attend a band concert, enjoy a movie, or simply take a walk along the 978-foot flight deck. The sports program aboard *Midway* includes volleyball games, basketball, or, when the occasion arises, a chance to enjoy the largest swimming pool in the world—the Pacific Ocean. Boxing matches are also arranged with competition among the leatherpushers in the crew. The large carrier also has its own radio station and several amateur disc jockeys take turns entertaining the crew with the latest hit tunes and news reports.

A Sunday at sea comes to an end as the bugler sounds taps. The crew turns in relaxed and ready for the coming week's work.

CREW MEMBERS enjoy boxing while off duty on Sunday.



PLEASURE APLENTY—Ship's disc jockey makes platter chatter. *Below:* Swim time in world's biggest pool.

PILOTS have off-duty fun during volleyball game.

Ocean Pickup

RECENTLY NAVY AIRMEN of All-Weather Attack Squadron 33 took to the air without their planes. This was during a training exercise held at NAS Quonset, R. I. The exercise held in conjunction with helicopters from HS-9 was designed to give squadron personnel realistic practice in survival techniques and to test their waterproof exposure suits.

Rendezvous was held in Narragansett Bay where the "Nighthawks" individually plunged into the water from a crash boat. Copters swung into position, dropped them a line, picked them up, and carried the airmen while hanging in mid-air to a spot near the station's hangar area where they were deposited. Photos show VA(AW)-33 personnel during the practice rescue.

LETTERS TO THE EDITOR

This section is open to unofficial communications from within the naval service on matters of general interest. However, it is not intended to conflict in any way with Navy Regulations regarding the forwarding of official mail through channels, nor is it to substitute for the policy of obtaining information from local commands in all possible instances. Do not send postage or return envelopes. Sign full name and address. Address letter to Editor, ALL HANDS, Room 1809, Bureau of Naval Personnel, Navy Dept., Washington 25, D. C.

Air Crew Insignia

SIR: As a matter of information, I'm trying to determine whether or not I still may wear my aircrew wings.

I earned these wings during World War II and have worn them up until the time that Change 5 of Uniform Regulations appeared and possibly shot me down. According to the change, you cannot wear the combat aircrew insigne unless you rate the stars to go with it. And you can't wear the new aircrew wings unless you're an enlisted man presently engaged in flying. Now what does a fellow like myself do? I don't rate the stars for my combat aircrew wings but I certainly don't wish to forget that I was an aircrewman just because I'm now commissioned.

I'm as proud of those wings as I am my gold ones. If a submariner can wear his dolphins even when he hasn't seen a submarine for the last 10 years, why can't the wings a person once earned and fought with remain a part of his uniform? I would appreciate any information you may have in regard to clarifying Change 5 and why it is written as such.—C. P. W., LTJG., USN.

• *Let's start off by saying that you are correct in your interpretation of "U.S. Navy Uniform Regulations" regarding the combat aircrew insigne.*

You say, however, that this prevents you from wearing the wings with which you fought. If you fought as a member of an aircrew by engaging an enemy aircraft, engaging an armed enemy combatant vessel, or engaged in offensive operations against enemy fortified positions, you would rate one or more stars on your combat aircrew insigne and you could now wear it.

Change 5 to "U.S. Navy Uniform Regulations" and Change 30 to the "BuPers Manual" (Art. C-7403) were the result of many recommendations and much research and investigation. The changes were primarily adopted to provide insignia which every qualified enlisted aircrewman can wear regardless of whether the individual is now a combat or non combat aircrewman.

If he is qualified but not serving as an aircrewman he may wear the distinguishing mark. If he is qualified and serving as an aircrewman he may also wear the aircrewman breast insigne. This aircrew insigne is the enlisted equivalent of the naval aviation observer insigne.

It was realized that certain officers who have qualified as combat aircrewmen would not be eligible for this aircrew insigne. But it was considered that these officers would have the opportunity to qualify for the naval aviation observer insigne.

In regard to your take-off on submariners: When a submariner graduates from enlisted to officer status he must similarly take off his enlisted dolphins and replace them with the officer's dolphins.—ED.

Retirement on AcDu Reserves

SIR: I'm confused and hope you can set me straight. What is the latest word in regard to retirement or transfer to the Fleet Reserve for active duty Reservists who have inactive time to their credit? —G. L. McG., YNC, USNR.

• *In accordance with current regulations a member of the Naval Reserve may be transferred to the Fleet Reserve upon completion of 19 years and six months of active service. He will then remain in the Fleet Reserve until he completes a total of 30 years' active and inactive service for retirement purposes.*

However, in the event that he has already completed 30 years of active and inactive service for retirement purposes at the time of his transfer to the Fleet Reserve, orders are issued immediately to effect his retirement on the first day of the month following his transfer to the Fleet Reserve.

Hope this information is what you need to set you straight on the road to retirement. If not, give us a growl.—ED.

Ma'am Is Correct

SIR: On page 40 of your February issue, in the article on naval courtesy, you say: A correct response to a question from a woman officer is either "Yes, ma'am" or "No, ma'am."

This contradicts both *The Bluejackets' Manual* (1957 Edition) and *Naval Orientation* (NavPers 16138-C).

On page 26, the *BJM* says, "Do not use 'Ma'am' or 'Sir' with woman officers; always use the rank or name."

On page 52, *Naval Orientation* states that, "The Navy Department has not authorized the use of 'ma'am' in addressing women officers."

Could you clear up this matter for me? —R. N. P., HM1, USN.

• *At the time the items in the "BJM" and "Naval Orientation" were written they were correct.*

However, in September 1956 (which was probably too late to make the 1957 BJM) the Chief of Naval Personnel approved the use of "Ma'am" as a suitable form of military address for women officers.

The curricula of the Recruit Training (W) School and the Officer Candidate School (W) have been changed accordingly.

The "BJM" is still correct in saying that you don't use "Sir" when you address a woman officer!—ED.

LIFE SAVERS—Crash, Rescue and Salvage Division, NAS Cecil Field, Florida, is typical of Navy's top rescue crews.

Old Lex

SIR: I have read what to me was a most enjoyable article in the Taffrail Talk column in the January 1959 issue. The part I enjoyed most concerned LCDR Johnson's finding an old copy of USS *Lexington's* THE OBSERVER.

But wasn't that the "Old Lex" CV 2, and not CVA 16 which was commissioned in 1943? I had the honor of being a member of 16's commissioning crew. Both were wonderful ships.—E. S., CDR, USN.

• *You are absolutely right. The carrier Lexington referred to in the Taffrail Talk, January 1959* ALL HANDS, *should have been designated CV 2 instead of CVA 16.*—ED.

Ribbon of Friendship

SIR: When I inquired about certain awards and medals at our personnel office I was unable to get any info on the "Friendship of Viet-Nam" medal or ribbon.

In June, July and August 1954, many amphibious ships in WestPac evacuated refugees from northern Indo-Chino to Saigon. SOPA received an award for outstanding accomplishment, and, to my knowledge, all men attached to the ships that participated were to receive an award.

At the time, I was attached to Commander LST Squadron Three. We were aboard USS *Knudsen* (APD 101), *Sphinx* (ARL 24), and *Mountrail* (APA 213). Commander Transport Division 13 in *Calvert* (APA 32), *Montrose* (APA 212), *Telfair* (APA 210), *Skagit* (AKA 105), *LST 855* and *LST 819* also participated.

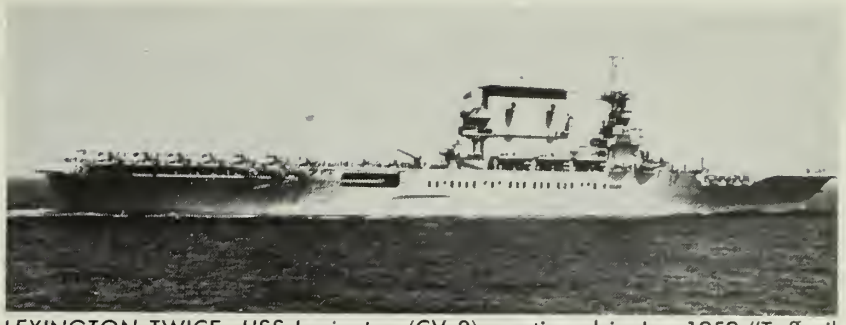
Was a medal or ribbon awarded for this operation?—H. R. A., BM2, USN.

• *There was a ribbon awarded for that operation, but the name by which you call it is wrong. We believe you are referring to the Presidential Unit Citation, "Ribbon of Friendship" awarded by the State of Viet-Nam to certain U.S. armed forces units which participated in the evacuation of Viet-Nam citizens during August and September 1954. BuPers Inst. 1650.8 tells about the award.*

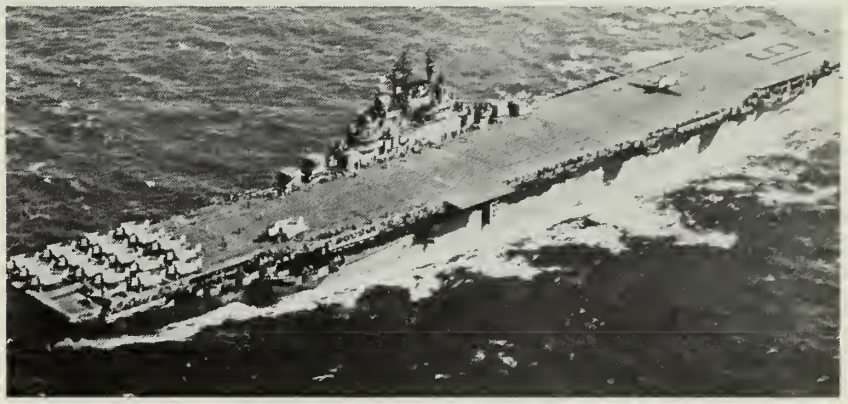
Here are the ships and units you refer to and the eligibility dates in 1954 for each:

LSTRon 3	*1 Aug. - 30 Sept.*
USS Knudson	*22 Aug. - 30 Sept.*
USS Sphinx	*28 Aug. - 30 Sept.*
USS Mountrail	*12 Aug. - 11 Sept.*
TRANSDIV 13	*1 Aug. - 30 Sept.*
USS Calvert	*22 Aug. - 30 Sept.*
USS Montrose	*16 Aug. - 16 Sept.*
USS Telfair	*15 Aug. - 16 Sept.*
USS Skagit	*22 Aug. - 20 Sept.*
LST 855	*27 Aug. - 30 Sept.*

If you were attached to any of these ships or units during the periods specified, you are eligible to wear the Ribbon of Friendship. There is no medal that accompanies this award.—ED.



LEXINGTON TWICE—*USS Lexington* (CV 2) mentioned in Jan 1959 "Taffrail Talk" is shown above. *USS Lexington* (CV 16) is shown below in '44 photo.



Early Retirement for Officers

SIR: I have two related questions.

First: When an officer submits a request for voluntary retirement on completing 20 years' service, who makes the decision as to whether or not the request is to be turned down because of the needs of the service?

Second: I understand that an officer requesting 20-year voluntary retirement must complete one year in his current tour. Does this year have to be completed before the request is submitted, or can the completion of the one year period coincide with the requested out date?—J. F. P., LCDR, USN.

• *According to SecNav Inst. 1811.3A, which contains information on voluntary retirement, applications from individuals in these categories will normally be given favorable consideration:*

Officers, other than flag and general officers, with 30 years' service.

Flag and general officers with 30 years' service and with at least five years' service as a flag or general officer.

Captains and colonels with at least five years' service in grade.

Officers who have twice failed selection for promotion.

Officers who are limited in the assignments they can be given (for instance, an officer whose general health has deteriorated).

Officers whose retirement would definitely alleviate serious personal problems.

If a request for retirement does not meet one of these criteria, the Chief of Naval Personnel will determine whether or not approval is contrary to the best interests of the service, and so recommend to the Secretary of the Navy, who makes the final decision.

As for your second question—the one year to be completed in your current tour is counted from the date of reporting to the date of retirement. However, since the needs of the service are the major factor in determining a retirement date, you would not necessarily have to complete the one year.—ED.

Say Hello for Us

SIR: In October 1958 you published a letter about a monkey which was on board an LST at Okinawa during World War II. In February 1959 a letter from LCDR George Cole, USN, said the mascot was probably the one in LST 267.

I agree with my former first lieutenant. Our mascot, Chief, was probably the monkey in question. At least, Chief outlived the "Red Rooster of Lingayen."

Since I am heading for duty in the Orient, perhaps I may bump into Ol' Chief once again. After all he's been through, I'm sure he'd welcome anyone from "Ye Olde 267" aboard his sampan. — Lloyd E. Linton, BM1, USN.

• *Since no other LSTs have put in a claim, 267 must undoubtedly be the right ship, and Chief must be the right monkey.*

Now that that's settled, how about letting us in on the story of the rooster.—ED.

Summer Grays

SIR: Recently an ex-Navyman told me that, sometime during the last 15 years, there was a summer liberty uniform for enlisted men below CPO, made of a light gray material.

I maintain such a uniform never existed. Can you clear this up for us? —T. O. L., YN1, USN.

• *You'd do well to listen to Grandpaw. This time, he's right.*

A gray working uniform for enlisted men was authorized in 1943 by Secretary of the Navy Frank Knox. The plan was to outfit all enlisted men with that uniform. The plan was discontinued, however, in February 1944 because of a shortage of gray twill fabric.

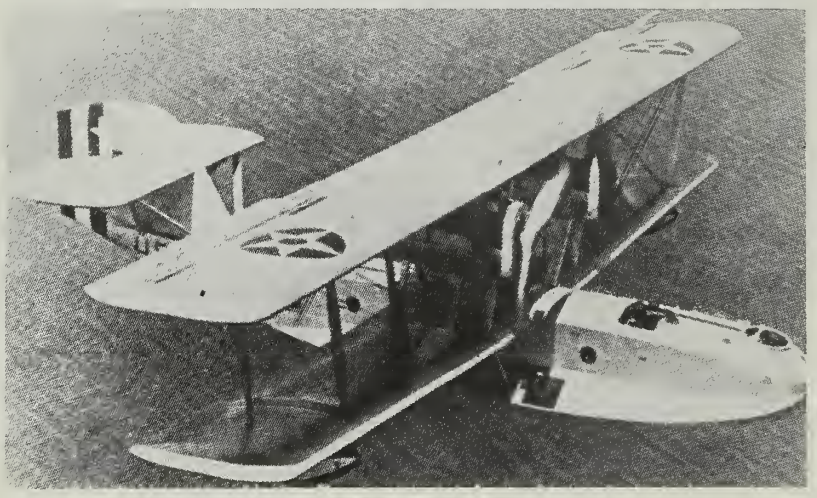
The uniforms already made were later used as a warm weather uniform for permanent shore patrol in the United States. The uniform consisted of a gray jumper and trousers, neckerchief, black shoes, gray hat, and a shore patrol brassard.

Again in 1946 (and this is where your friend gets away with the 15-year statement) the gray uniform was tried. This time, since it was an evaluation, the uniform was probably worn as a liberty uniform by a small number of Fleet personnel in late 1946 and in 1947. The uniform was not adopted, however, and was not available to a sizable portion of the Fleet.—ED.

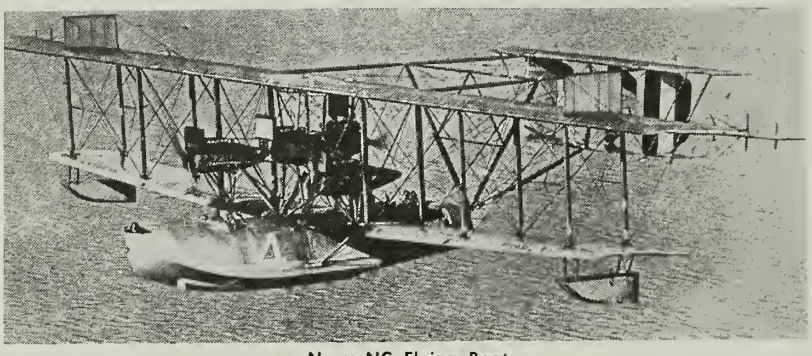
Navy Oldtimer Recalls Those Flying Boats of the Battle Fleet

SIR: In your February issue I paid special attention to the letter from MAJ Milton C. Jones, AUS (Ret.), about USS *Shawmut* and *Oglala*. Since I have served in both ships I remember them well.

When *Shawmut* was flagship of the Atlantic Air Force, I was a member of the first Fleet air squadron. Our CO was CDR Bruce Leighton and our executive officer was LCDR James Hawkins.



Navy PN-9 Flying Boat



Navy NC Flying Boat

Navy F-5-L Flying Boat

We started out with six H-16s, then got six F-5-Ls, which were later increased to 12. Both the H-16 and the F-5-L were wooden flying boats. Their motors were the old Liberty engines, which had to be overhauled after every 50 hours of flying time. Later on, we had some NCs, PN-7s, PN-8s and PN-9s—all flying boats.

Every winter we flew as spotters for the Fleet during target practice, taking pictures which I believe were the first of their kind in naval history. We didn't carry parachutes—just extra gears, a can of oil and a can of water. We'd take off in the morning from *Shawmut* and make it by noon to the minesweeper, USS *Sandpiper*, or the destroyer, USS *Harding*, to refuel. We only carried about 250 gallons of gasoline in four tanks for the two Liberty motors.

When we first started to fly with the Battle Fleet everything was new to us, but we soon got used to our work.

On cold days, the planes' motors were very hard to start, because we only had six-volt batteries and hand cranks. Another problem was having light gears in the motors, which broke down quite often.

How well I remember Tom Maxted, the Navy heavyweight champ mentioned in your February issue, for I have worked out with him. After he left the Navy he went seven rounds with Luis Firpo, "The Wild Bull of the Pampas."—Paul F. Forster, ADEC, USN (Ret.)

• *Anyone who could have lasted that long with Firpo must have been quite a fighter.*

And, for our money, the men who flew in those early planes were no slouches either.

Sometimes, it's hard to realize what tremendous strides aviation has made since those pioneer days. Here we are, talking about sending men around the world in space satellites, and yet, some people can still remember when the air age was just barely getting started. And they're not even old timers.—ED.

Foreign-Speaking Planes

SIR: The "1920 Marine fighter-trainer" shown on page eight of your November 1958 issue is rather unusual inasmuch as the aircraft is a Fokker D-7, the famous German pursuit plane of World War I. Although the Marine Corps operated a varied assortment of ex-Allied aircraft in the early '20s, this is the first time I have seen a photo of a D-7 with Marine Corps markings.—William A. Riley, Los Angeles, Calif.

• *An interesting and very true observation. The plane, which ranked as one of Germany's best WW I fighter planes, was received by the U. S. Marine Corps in 1920 as part of Germany's reparations following World War I. U. S. Marine pilots used the Fokker D-7 for training. It had a speed of 130 mph.*

You also pointed out that the Marine Corps operated a varied assortment of ex-Allied aircraft in the early '20s. Right again! For example, in 1918 they received four British-designed DeHavilland DH-4 planes which were built in the United States. This plane, nicknamed "flying coffin," later became the standard American combat plane. It could stay aloft for four hours, had a ceiling of 19,000 feet, could climb to 10,000 feet in 14 minutes, and had a speed of 124 mph.

Later the Marines flew Caproni planes from Italy, Handley-Pages from Great Britain, and DD flying boats from France.—ED.

Zip 'n Zee

SIR: Though I am soon to be transferred from an AF, I feel it's time the reefers got some attention.

Many of the men serving in combatant ships think the crews of auxiliary ships have it easy. They might not think so when reveille was being held at 0330 so that they could break out stores for expected customers who sometimes do not appear. I don't mean to take any credit away from the combatant ships—they do a great job—but I would like to remind them the auxiliary ships are important too.

My ship is USS *Zelima* (AF 49), known to her crew as "the Zip'n Zee." She is attached to Service Force, U. S. Pacific Fleet, and I feel she is the most, or at least one of the most efficient reefers in the Pacific. She is known in WestPac as a ship that gets things done, and gets them done right, as these typical testimonials prove:

"COMSERVRON Three notes with pleasure dependability and excellent performance of duty by *Zelima* during current WestPac tour. You have contributed materially to logistic support of the Seventh Fleet."

"The officers and men of USS *Edmonds* (DE 406) wish to express their appreciation for the services rendered by *Zelima* on 6 Dec 1958 in effecting repairs to number one main feed pump.

SAILING, SAILING—Landing Ship Tank USS *Graham County* (LST 1176) makes her way through Atlantic waters while out of her home port of Norfolk, Va.

The work, normally a repair facility job, was accomplished on board *Zelima*, allowing *Edmonds* to meet her operating schedule.—Commanding Officer, USS *Edmonds*.

"I wish to report USS *Lexington's* (CVA 16) appreciation and thanks for the unusual efforts made by *Pollux* and *Zelima* to supply needed items when *Lexington* unexpectedly departed Yokosuka on 21 Oct 1958. In order to top off our ship's store, clothing and small stores and provisions stocks before departing port, *Pollux* and *Zelima* cheerfully expended great effort virtually throughout the night of 20-21 October after being notified at about 2100. This was done under the handicap of a very heavy rainfall. The items involved were scheduled to be delivered on or about 24 October, but sudden change in operational orders precluded this. The efforts and responsiveness of *Pollux* and *Zelima* were a great credit to the service and to Task Force 73."—Commanding Officer, USS *Lexington*.

Pardon my boasting, but I think *Zelima* is a ship worth bragging about.—Robert E. Bell, YN3, USN.

• *Y'know, we have a hunch that pride like yours is the thing that's put the zip into the* Zip'n Zee.—ED.

Intelligence Specialists

SIR: With the establishment of the new photographic intelligenceman (PT) rating, what will become of men like myself who hold Special Job Code 9936 (Operational Intelligence Specialist)?

I have worked in Operations and Intelligence since 1951. I have held Special Job Code number 9936 since 1952.

I want to remain in this field.—H. M. D., QMC, USN.

• *The duties performed by Operational Intelligence Specialists are considered separate from those of the PTs. Enlisted Navymen assigned the 9936 special program code will not be affected by the establishment of the new rating.*—ED.

Exams for Advancement

SIR: As you probably heard, the February examinations consisted of 180 questions—30 more than usual. Of these, 120 were professional while the remaining 60 were strictly military.

Were each of these parts scored separately? And if so, if I failed the second part, devoted to military questions, would I fail the entire exam?—P. E. S., BM2, USN.

• *The February 1959 examinations were scored in two parts but both marks were combined to establish one final score. Therefore, you could have failed either section and still have received a passing score on the over-all exam. The people responsible for the exams state that, hereafter, all E-4 through E-7 examinations will consist of 150 questions covering both military and professional subjects.*—ED.

Reserve Officers Not in Uniform

SIR: I imagine you have had a zillion letters on this, but I have had many beefs and inquiries about something you said in your short course on naval courtesy in the February issue. In the section on, "Special or Unusual Cases," which begins at the bottom of page 31, you state that: "Reserve officers not an [on] active duty and in uniform are not entitled to a salute."

I am sure you intended to insert another "not" between "and" and "in."

If I remember, you salute the uniform and insignia, not the man.—W. A. K., CDR, USNR.

SIR: In your February issue you say, "Reserve officers not on active duty and in uniform are not entitled to a salute."

If they were in uniform how would you know they were Reserve officers?—Herman T. Vest, SK2, USNR.

• *Another "not" would have made the meaning clearer, especially since our typo gremlin was at work. We intended the first "not" to apply to both "on active duty" and "in uniform."*

We hope this will keep down the flow of letters on the subject.—ED.

Ship Reunions

News of reunions of ships and organizations will be carried in this column from time to time. In planning a reunion, best results will be obtained by notifying the Editor, ALL HANDS Magazine, Room 1809, Bureau of Naval Personnel, Navy Department, Washington 25, D. C., four months in advance.

• USS *Thomas Jefferson* (APA 30)—The 12th annual reunion will be held at the Severin Hotel, Indianapolis, Ind., on 22 and 23 August. For details, write to William A. Schutte, 850 North Pennsylvania St., Indianapolis 4, Ind.

• USS *Quincy* (CA 71)—The eighth reunion is scheduled for 14, 15, and 16 August, at the Hotel Saint George, New York City. More details are available from Robert Moore, 68 Allison Rd., Roselle, N. J.

• *LCI(L) Flotilla 24* and *Beachjumper Units Six* and *Seven*—The sixth reunion will be held on 18, 19 and 20 September at the Pere Marquette Hotel, Grafton, Ill. Write to Milton B. Kirby, Woodruff Building, Springfield, Mo.

• *SACO*—U.S. Naval Group China—The fifth annual reunion is scheduled for 31 July through 2 August at the Edgewater Beach Hotel, Chicago, Ill. For more information, write to George D. Crowley, 135 South LaSalle St., Chicago 3, Ill.

• *25th Seabees*—The third annual reunion will be held on 1 and 2 August at the Hotel Bismarck, Chicago, Ill. For further information, write to Mrs. Dale C. Mutz, 302 East Main Cross St., Edinburg, Ind.

• *59th Seabees*—The seventh annual reunion is scheduled for 7, 8 and 9 August at the Atlanta Biltmore Hotel, Atlanta, Ga. For more details, write to George P. McEntire, 125 Mimosa Circle, Smyrna, Ga.

• *107th Seabees*—The fifth reunion will be held on Labor Day weekend at the Pick-Carter Hotel, Cleveland, Ohio. Write to Foster D. Jackson, 16609 Marquis Ave., Cleveland 11, Ohio.

• USS *Navasota* (AC 106)—All crew members who served from 1953 to 1956 and who are interested in holding a reunion with time and place to be decided may write to Robert K. Bauer, 3525 West 120th St., Cleveland 11, Ohio.

• *LCVP Unit Four*—All members who served during the Rhine River operation who wish to hold a reunion in New York may write to Raymond F. Bednar, 104 Kirshon Ave., Staten Island 14, N. Y.

• *122nd Seabees*—Officers of the World War II 122nd Seabees who are interested in holding a reunion next fall are invited to write to CDR M. E. Scanlan, CEC, USN, 807 North Garfield St., Arlington 1, Va.

Brassard or Shoulder Patch?

SIR: The standard "tie-down" brassard for recruiters has a tendency to roll up and down, rotate on the arm and wrinkle in such a manner that you cannot read it. We feel that it is inadequate.

As a solution to this, we think that the Navy should authorize some sort of shoulder patch for recruiters. This would contribute to military smartness as well as assist civilians to identify members of the Recruiting Service. What do you think?—F. H., OMC, USN; and R. B. L., YNC (SS), USN.

• *Your proposal that Navy recruiters wear a shoulder patch sounds like a good idea, but there are a couple of reasons against its adoption.*

By definition, a brassard is indicative of a type of duty of a temporary nature to which the wearer is assigned. The recruiting brassard is required to be worn by members of the Navy Recruiting Service while on duty. Personnel assigned to recruiting duty should not wear this brassard during off duty hours. If you wore a patch sewn on the uniform it could not be readily removed.

Officers as well as enlisted personnel are required to wear the Navy Recruiting Service brassard. The wearing of a patch-type mark by officers is not considered appropriate.

You may submit your proposal officially to the Chief of Naval Personnel, via your commanding officer, but success cannot be guaranteed.

Incidentally if you have any recommendations concerning the Navy uniform, forward them to the bureau. They'll be carefully considered.—ED.

Deep Freeze Medal?

SIR: I would like to know if the Navy is contemplating striking a medal or awarding a ribbon for the recent Antarctic expedition. What I'm referring to are Operations Deep Freeze I, II, III and IV.—M. B. O., HM1, USN.

• *A bill (H.R. 3923, 86th Congress, 1st Session) has been introduced and referred to the Committee on Armed Services. This provides for the presentation of a medal to persons who have served as members of a United States expedition to Antarctica. There is no official information available on the legislation.*—ED.

Social Security and Retired Pay

SIR: I ran across an article of Social Security benefits which appeared in a newspaper. It not only left me slightly confused but, frankly, somewhat worried. The confusion stems from the figures (and some of the facts). The worry has to do with my future retainer/retirement pay.

To give you some idea, let me mention some of the statements in the article.

"If you earn $1200, you can collect your benefits in any one year in full. But if you earn $1200.01, you lose one month's benefits."

The article goes on to state that you can collect a benefit in any month in which you earn no more than $100 a month (formerly it was $80 a month). Thus, if you earn $4000 in one month and $100 per month in the other 11 months, you can collect 11 pension checks even though your total earnings are $5100. But if your total earnings come to $2081.01, and in every month you earn more than $100, you can't collect a single benefit check.

Why? Because, according to the article, for each $80 or fraction thereof above $1200, you lose one benefit check. And if your yearly earnings hit $1280.01, you lose two checks; earnings of $2080.01 would snatch away all checks because in every month you earned more than $100.00.

After reading the above, you can see that it doesn't take a mathematical genius to figure that a CPO's retirement check comes to the annual sum of $2100.00. Now for the worry part. Does this mean that I've been contributing money to Social Security and, later on, won't be able to collect any Social Security checks?—T. J. W., JOC, USN.

• *First of all, military personnel can receive benefits to which entitled from Social Security* in addition to their military retired pay, *since retirement pay is* not *income for Social Security purposes.*

Next point. As a general rule, you can't go on working after you are 65 and draw Social Security benefits at the same time. If you continue to work and make more than $1200 a year, you stand to lose one month's benefits for each $80 you make in excess of $1200. But no matter how much you earn over $1200 in a year, you will still be able to get the monthly benefits for any month in which you neither earned wages of more than $100 nor engaged in self-employment activities. "Earnings" in this case mean all *earnings as an employee whether covered by the Social Security law or not. Also, net earnings from self-employment, income from other sources such as dividends, interest, rents, etc., do not have any effect on benefits and therefore do not have to be reported to the Social Security Office.*

Once you've reached age 72 you can earn any amount and still draw your full Social Security benefits.—ED.

Officer's Home of Record

SIR: Article B-2206, *BuPers Manual*, concerns officers' addresses. It mentions NavPers 262 and refers to all officers, although it was my impression that it applied only to Naval Reserve officers.

The article goes on to say that the form should be filed in the Officer's Service Record. What happens if it's missing from the record? A study of the form shows that it can't be filled in just any old time.

I might mention that Article B-2207 does not list this as one of the required forms for officer's service records but does, instead, list an obsolete form. Can you advise?—W. S. C., Jr., LT, USN.

• *The "Officer's Report of Home of Record and Place from Which Ordered to a Relevant Tour of Active Duty" (Form NavPers 262) was introduced by BuPers Notice 1085 of 23 Nov 1956. The form became effective for use by all officers, Regular and Reserve, who,* on or after 1 Jan 1957 *are appointed to officer status or who report for extended active duty.*

The information provided by this form is used primarily to determine entitlement to travel and transportation allowances at the time of separation from active duty. It must be included in the detachment endorsement on an officer's separation orders.

For officers who were appointed and who reported for their current tour of active duty before 1 Jan 1957, the information which would be entered on NavPers 262 is included in the officer's separation orders by the Chief of Naval Personnel.

The list of documents contained in Art. B-2207 of the "BuPers Manual" is not an all-inclusive list of documents which may be filed in an officer's service record. Only those documents required by directive should be filed.—ED.

Duty before Retirement

SIR: Somewhere along the line I got the impression that a man completing his twenty-eighth year of active duty could apply for duty in the naval district of his choice. On the other hand, I've also heard that you must complete the full 30 before a request of this kind can be submitted. Can you clarify?—R. C. SDC, USN.

• *The straight scoop is this: Individuals desiring retirement upon completion of 30 years' service may submit applications for retirement and shore duty of their choice 28 months in advance of such retirement. If you want further information on the subject, check over BuPers Inst. 1812.1.*—ED.

Sea Duty Tour

SIR: In BuPers Notice 1306 of 9 Jan 1959 (Seavey, Second Segment), all shipboard-type rates were given a decrease of from two months to almost a year in their required sea-tour commencement dates. All, that is, with the exception of EN, EM and BT. Was there any particular reason for this?

I received a query from an EN1 who was informed by a personnel man at his past duty station that he would not make the '58 segment because his sea-tour date was July 1954. He was further told that he should make the '59 segment as the dates would undoubtedly be advanced.

Can you tell me what happened? Was it the needs of the service, or is the sea duty tour for ENs going to be over five years? Will the EN1 have to put in yet another year at sea after missing the '58 segment by one month and apparently the '59 segment also?

Another question. Has the correspondence course *Military Requirements for Petty Officer 1 & C* been set up yet? The ship received several copies of the Manual NavPers 10057 but I have seen nothing so far on a correspondence course for it.—M. T. S., YN2, USN.

• *You were right the first time. The sea-tour commencement cut-off dates which are established in Segment Notices are based on the needs of the service.*

The EN1 in question, whose sea-tour commencement date is July 1954, will have to wait until the BuPers Notice for Segment Two 1960 is promulgated, establishing sea-tour commencement cut-off dates effective at that time.

NavPers 91207 ("Enlisted Correspondence Course for Military Requirements for CPOs and PO1s") was made available in November 1958.—ED.

Change to Permanent CPO

SIR: Can the enlisted status of a CPO, acting appointment, be changed to permanent appointment, after he has been a commissioned officer for one year?

I seem to remember that I read this somewhere along the line. Can you set me straight?—W. M. P., PNC, USN.

• *The current "BuPers Manual" does set the minimum service requirement for change of status to E-7, permanent appointment, at one year. This is being held in abeyance, however, and three years is being required.*

In a forthcoming reprint of the Manual, the minimum service required will be established as three years as CPO, acting, before a recommendation can be made for change to permanent chief petty officer status.—ED.

THE BULLETIN BOARD

Pensacola – It's the Spot for Many Navymen and Their Families

PENSACOLA, FLA., as the home of the Naval Air Basic Training Command, is also the headquarters for a large number of Navy families. Officers and enlisted personnel who receive orders to duty there will find it interesting both from the standpoint of their naval assignment and as a place to live.

Approximately 88 per cent of the Naval Air Basic Training Command Officer billets at Pensacola are aviator billets and of these, 75 per cent are instructor billets, either flight or ground. Many enlisted men are assigned duty in the Training Command, to become an integral part of the system necessary to carry out the mission of training student naval aviators. There you will meet men in practically every rating that the Navy has to offer—aviation, administrative and clerical, electronics, engineering, medical—to mention only a few. Both aviation and nonaviation ratings are required.

Duty Assignments—Naval aviators reporting to Pensacola for the first time can normally expect to be assigned the primary duty of flight instructor. Upon reporting to Command Naval Air Basic Training they are assigned to one of the local subordinate commands for duty. Their new CO will determine the billet they will fill and send them to the Basic Standardization Group, NAS Pensacola, for a period of from six to eight weeks. Here they are transformed from a normal aviator to a well polished, qualified flight instructor. From BSG they return to their command and go to work in a Basic Training Group.

In the case of enlisted personnel arriving for duty, their assignment is determined by the personnel officer who screens their records when they check in.

Wave officers and enlisted women are assigned to numerous activities within the Pensacola complex. The Chief of Naval Air Basic Training has a senior woman officer assigned to his staff as "Assistant for Women" to act in an advisory capacity on matters concerning the administration of women personnel. In addition, the CO of each naval activity to which women personnel are assigned has designated one woman officer (Wave Representative) to advise him and furnish supervision as required for the administration of women within his jurisdiction.

Officers, NavCads, AOCs and enlisted personnel under orders to the Chief of Naval Air Basic Training will, upon arrival at the Naval Air Station, log in at the Officer-of-the-Day's office.

Officers assigned for permanent duty are processed through the Basic Officer Personnel Office, Rm. 211, Bldg. 45. NavCads, AOCs and Student Officers with orders to flight training are processed through the Student Personnel Office, Rm. 220, Bldg. 45.

Enlisted personnel are processed by the Enlished Personnel Officer of the field or unit to which they are ordered.

The Marine Aviation Detachment is located in Buildings 701 and 626 at NAS Pensacola. Directly under the Chief of Naval Air Basic Training, the Marine Aviation Detachment is the administration center for all Marine officers, student and instructor. All Marine officers reporting for duty check in at Building 626.

Housing — Generally, housing in the Pensacola area is not considered critical, in comparison with other military bases. There are many housing possibilities available to those who make use of the various means of locating them.

Single officers or married officers who do not bring their families with

Two Of Every Ten NavCads Are From Enlisted Ranks

At least 20 per cent of all Naval Cadets are picked from enlisted men on active duty. Sometimes this figure is even higher. Currently, for example, about 30 per cent are former bluejackets.

The qualifications are high and competition is keen. Men selected enter a program in which they become both officer and aviator.

If you're interested, look over the following qualifications. You may be a potential naval aviator. To be eligible, you must:

- Be an enlisted man of the regular Navy or Naval Reserve on active duty for at least a year before submitting an application.
- Be a citizen of the United States.
- Have 60 semester hours or 90 quarter hours of unduplicated college work at an accredited college or university, or have successfully completed the USAFI General Education Development Test, one-year college level, with a minimum combined GCT/ARI of 120, and MECH score of 58, or have either 30 semester hours or 45 quarter hours of unduplicated college work at an accredited college or university.
- Be at least 18 and under 25 years of age when you submit your application.
- Agree to remain on active duty for three and one-half years after you finish flight training.
- Be unmarried and agree to remain unmarried until commissioned.
- Be physically qualified and aeronautically adapted for the actual control of aircraft in accordance with Chapter 15 of the *Manual of the Medical Department.* (Waivers of age and physical standards will not be granted.)

This program leads to a commission as Ensign in the Naval Reserve. If you think you meet the above qualifications, submit your application to the Chief of Naval Personnel (Pers B6), via your commanding officer. BuPers Inst. 1120.-20B (effective 1 Jul 1959) gives all the details.

them may check into BOQ 600.

For married personnel, the housing picture is constantly changing. Most of the time housing is plentiful, yet there are times when the situation is critical because of large turnovers which occur several times a year.

As a general rule, however, housing is no particular problem. There are a limited number of public quarters aboard. Married officers wishing quarters aboard for their families should make application to the commanding officer through the aide to the executive officer.

Married enlisted personnel should apply to the housing officer, Building 734, Woolsey Court, just inside the Main Gate (Phone 7151). There is usually a waiting list for enlisted housing.

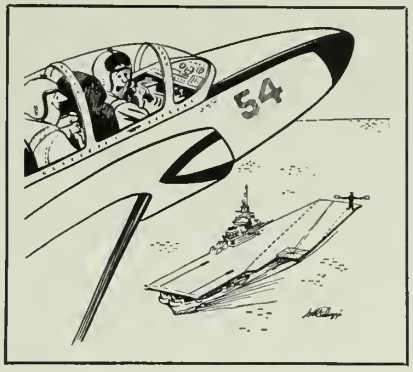
There are many housing projects and subdivisions in the Greater Pensacola area. Furnished rentals run from about $60 to $85 for one-bedroom units; $65 to $110 for two-bedroom units and $85 to $125 for three-bedroom units.

Wave officers assigned to activities either based aboard NAS or within commuting distance may check into BOQ 600. Women officers assigned to the U.S. Naval Hospital live in BOQ Bldg. 664 within the hospital grounds. Women officers assigned to NAAS Whiting Field live in BOQ 1450 at Whiting Field.

Enlisted Waves assigned to activities based at NAS (except USNR) report to the Waves Master-at-Arms, Bldg. 650, for assignment to living quarters in one of the two Wave Barracks—650 for non-rated Waves and 652 for rated Waves.

Enlisted women assigned to the U.S. Naval Hospital, NAS Pensacola, live in Bldg. 485 within the hospital grounds. Enlisted women assigned NAAS Whiting Field live in Bldg. 1414 at Whiting Field.

Buying a House — The Pensacola Chamber of Commerce maintains a list of area realtors who may be contacted in regard to rentals. The West Pensacola Chamber of Commerce keeps a current list of available rentals reported by homeowners and will furnish the information to anyone calling them (HEmlock 8-9407). Other means of learning of rentals are the classified ads in the local papers and the station newspapers. Some find it worthwhile to drive through the residential area looking for rental signs. Often some of the better units are rented this way without resorting to advertising.



"He's had plenty of training—he worked his way through college as a parking lot attendant."

For those interested in buying a house, the average equity (subject to change, of course) is between $1,000 and $2,000. Equities are somewhat lower for the newer houses and higher for older ones. Monthly payments vary considerably with $60-$70 as an average. Many find purchasing a home as the most economical housing plan, for the house may be rented or resold when the tour is over.

Florida has a homestead exemption law which permits home-owners (they must actually live in the house) to be free from the real estate tax. There are certain provisions, however, which must be complied with. An important one is the proper filing of application for exemption. Unless done according to the rules, exemptions may not be granted. Tax on a house with sale value of $15,000 is about $250, depending on assessment valuation. Ownership deed must be executed and recorded and the owner must be living in the house before 31 December in order to file for exemption for the ensuing year. Application for exemption must be filed with the Tax Assessor before the end of March following the year of purchase and each year thereafter.

Utilities — Gulf Power Company supplies electric service to Pensacola and Milton. The Pensacola office is located on Pace Blvd. just north of Garden St. The telephone number for all departments is HE 2-7451. Local offices in Milton are located on Willing St. just north of Highway 90.

Natural gas is available through the City of Pensacola. Deposit required is $10.00, payable at City Hall. Water, when supplied by the City of Pensacola, requires a $3.00 deposit. In the Warrington area, water is from People's Water Service Company and no deposit is required.

The Southern Bell Telephone and Telegraph Company, with its business office located at 418 W. Garden Street, serves residents in the Pensacola area.

To obtain telephone service it is

You May Become a Naval Aviator as an AOC

Enlisted men in the Regular Navy or Naval Reservists on active duty who are college graduates may apply for flight training as Aviation Officer Candidates.

To be eligible under the AOC program, an enlisted man must:

- Be a citizen of the United States.
- Be at least 19 years of age, but under 26, at time of submission of application.
- Have a baccalaureate from an accredited college or university with a minimum of 120 semester hours.
- Be physically qualified and aeronautically adapted for the actual control of aircraft in accordance with the *Manual of the Medical Department.*
- Have 20/20 vision, uncorrected.
- Agree to remain on active duty three and a half years after completion of flight training.
- Be at a permanent duty station for at least two months.

Selected candidates will be ordered to NAS Pensacola, Fla. After successful completion of 16 weeks of officer indoctrination and pre-flight training, they will be commissioned Ensign in the Naval Reserve.

Applications should be forwarded via your commanding officer in accordance with BuPers Inst. 1120.29.

How to Qualify as an 'OI' for Flight Training

Flight training may be taken by officers already in the Navy or Naval Reserve, and by those men soon to be commissioned.

To be eligible as an "OI" (for Officer Input), you must:

- Be a line ensign or above in the Regular Navy or Naval Reserve, or be in training as an officer candidate leading to a commission as ensign in the line of the Regular Navy or Naval Reserve.
- Be less than 26 years of age at the time of application.
- Have successfully completed a minimum of four semester's undergraduate work at an accredited college or university. (You must have been in good academic standing at the finish of the final semester's work.)
- Be physically qualified and aeronautically adapted for the actual control of aircraft.
- Not have been previously separated from any flight training program of the Army, Navy, or Air Force, except for reasons of being temporarily physically disqualified.

Officers must also agree to remain on active duty for a definite time after they complete flight training. See BuPers Inst. 1520.20A for detailed information.

necessary either to visit the business office or to dial HEmlock 3-9001 where a representative will help you with your telephone problems.

Household Effects—Upon arrival in the area either call GL 5-3211, extension 2250 or 7207 or check at building 603, Household Goods Section, to see if your goods have arrived.

If your household goods are consigned to storage and you are unable to accept delivery within 90 days, it will be necessary for you to sign papers for additional storage. This must be done before the expiration of the 90 days if the government is to assume the charges.

If you have made express shipment of items of extraordinary value and consigned to the express company in care of yourself, it will be necessary for you to handle the delivery with the express company or pick it up yourself, as the government will not make delivery.

If your household goods are damaged when you receive them, call the Household Goods Section and request information on procedure to follow. Do not refuse to sign commercial bill of lading and/or freight bill on government bill of lading because your property has been damaged. Make a notation on the reverse side of the government bill of lading and in the space "Receipt of Delivery" on the commercial bill of lading and/or freight bill, as well as the carrier's inventory. Do not discard or repair the damaged property before it is inspected.

Vehicle Pass and Tag Information—One primary concern upon reporting will be obtaining an authorization to bring your vehicle aboard. You can obtain a visitor card which is valid for a limited period of time. To obtain a permanent tag, it will be necessary to comply with the following requirements:

First: Have the vehicle in proper mechanical condition to pass an inspection. Of particular interest here are the lights, muffler, windshield wiper, brakes, hand brake, steering, tires, horn, and glass.

Second: Have the proper state registration with you at the time of application.

Third: Have an approved insurance policy with you at time of application for liability coverage in a minimum amount of $5,000, $10,000, $5,000 property damage and valid for an extended period.

Fourth: Have valid operator's permit with you at time of application.

Violation of station and local traffic laws results in the assignment of demerits, the accumulation of which can result in suspension of station driving privileges.

Legal Assistance—Legal assistance for all military personnel and their dependents is readily available. Each command has a full-time certified lawyer who is qualified to render legal assistance.

You will find all these legal officers well equipped and ready to provide competent legal assistance without any obligation.

The Commissioner of Motor Vehicles is located at Tallahassee, Florida. License plates expire on 31 December. There is a grace period for new license plates until 20 February. The cost is from $5.00 to $25.00 depending on the weight of the vehicle.

You can obtain a driver's license at 18 years of age or at 16 years with parental consent. Driver's license expires on 30 September and costs $1.25.

The city of Pensacola requires dogs to be licensed. A rabies inoculation is required. License for male dogs costs $1.00; for females $2.00.

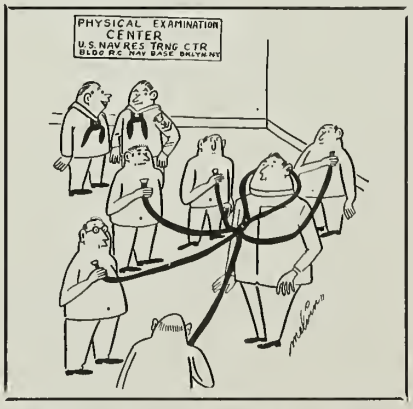
For residents of the State of Florida, a fishing license for fresh water fish costs $1.75, except that no license is required in the county of residence provided a pole or line is used.

A hunting license for residents of the state at large for counties other than the county of residence is $4.00 per county. Hunting license for residents for county of legal residence is $1.75.

Taxes—There is no Florida state income or inheritance tax. There is a city and county property tax. The rate is variable and based on assessment value. There is $5,000 homestead exemption on most of the city and county property. The rate also varies slightly in various areas. The tax in the city comes to approximately $10 per $1,000 and about $50 per $1,000 in the county.

Dependent Passes—The new dependent passes are now in use. They are a means of identification for your dependents and also serve as

All-Navy Cartoon Contest
J. F. Melvin, HM1, USN



"This is the reason why we can conduct more examinations in a given period than any other unit in ComThree."

an international privilege card. They are good until the expiration of your enlistment. Applications may be obtained at your personnel office.

The dependent pass must be used as identification for the following facilities: In and out gate, station movie, commissary store, Navy Exchange, Marine Exchange, medical care, officer's mess (for commissioned and warrant officers and their dependents), enlisted clubs (enlisted personnel and dependents) and station library.

UNIFORM—Here is a rundown on uniforms, as of the beginning of this year:

Uniform for Naval Officers and Chief Petty Officers

A. Summer Uniforms (15 April-31 October)	
Dress Uniform	Service Dress White
Uniform of the Day	Service Dress Khaki (with coat) White Tropical long
Working Uniform	Khaki Tropical long Service Dress Khaki (without coat but with tie)
B. Winter Uniforms (1 November-14 April)	
Dress Uniform	Service Dress Blue Bravo
Uniform of the Day	Service Dress Blue Bravo, Aviation Winter Working Uniform or Service Dress Khaki
Working Uniform	Service Dress Blue Bravo, Aviation Winter Working Uniform, or Service Dress Khaki

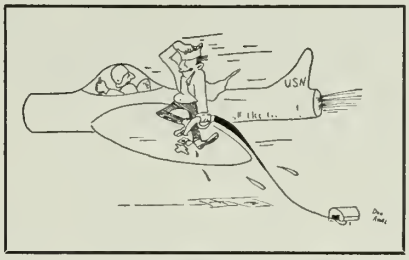
Uniforms for Naval Enlisted Personnel

A. Summer Uniforms (15 April-31 October)	
Dress Uniform	White Alfa, with neckerchief and ribbons
Uniform of the Day	White Alfa
Working Uniform	White Alfa, Undress Blue Bravo, or as prescribed
B. Winter Uniforms (1 November-14 April)	
Dress Uniform	Dress Blue Bravo
Uniform of the Day	Dress Blue Bravo
Working Uniform	Undress Blue Bravo or as prescribed

Station Newspapers—One of the best ways to keep informed of what's happening and what's happened on the station is by reading the station's newspaper. The service information office of each station publishes a newspaper, distributed free to all hands.

Papers are placed in barracks, shops and offices to give each man an opportunity to read the news of his field.

All-Navy Cartoon Contest
D. D. Awalt, MM3, USN



"Sir, better turn around. I'm about out of hose!"

Heading the list of papers is "The Gosport," published by NAS Pensacola. Eight thousand copies of this eight-page, offset newspaper are distributed each Friday. The paper contains a sports page, a civilian page, plus schedules of divine services, a list of movie schedules, new arrivals at the station library, various feature articles, and a "special events" column giving club and social activities for the coming week.

Second largest service paper in the Basic Training Command is the "Whiting Tower," distributed every Friday to personnel of NAAS Whiting Field. This eight-page, letterpress newspaper which carries both military and civilian news has a circulation of 2500.

Other NABT papers are the following: "The Seminole," NAAS Saufley Field, 1000 copies, four pages, published weekly on Friday, and "The Collective Pitch," HTG Ellyson Field, 800 copies, four pages, published every other Wednesday.

Base Locator—Call NAS information Ext. 2216. They have a locator file which tells which field or command the sought-after man is attached to. This may be enough, but if not, a call to the personnel office of his command will further locate the man through his 500 card. This will indicate division or office for which he works.

Thus, with a minimum of time and trouble, contact can be made with any Navyman in Pensacola, merely by knowing his name and the

Aviation Training for MarCads

Enlisted members of the Marine Corps may apply, if eligible, for flight training as Marine Aviation Cadets. The flight training at Pensacola, Fla., is identical to that given a Naval Aviation Cadet.

To be eligible for the MarCad program, an enlisted Marine must:

- Be a male citizen of the United States.
- Be at least 18 but less than 25 at the time the application is submitted. (Applicants under 21 must have consent of their parent or guardian.)
- Be unmarried and agree to remain unmarried until commissioned.
- Be physically qualified and aeronautically adapted to actually control an aircraft, as set forth in the *Manual of the Medical Department*. (The minimum qualifying scores on the Aviation Selection Tests are AQT: 4, and FAR: 4.)
- Have completed a minimum of two full years (60 semester hours or 90 quarter hours) of unduplicated college work. In the absence of this, the applicant must have completed one year of college (30 semester hours or 45 quarter hours), or have the service accepted equivalent (USAFI GED college level test), plus a composite GCT score of 120 and a Pattern Analysis score of 116.
- Agree to remain on active duty for three years after successful completion of flight training.

Complete details on this program are listed in Marine Corps Order 1120.1B.

The Marine Corps also selects its own students for the Aviation Officer Candidate (AOC) program and for the Officer (OI) flight training program. The qualifications are the same as those listed for naval personnel. Complete information on the Marine AOC program for civilian applicants is listed in Marine Corps Order 1120.6 and Marine Corps Order 1111.6A. Qualified enlisted personnel may apply for AOC training in accordance with Marine Corps Order 1111.1A. Marine officers interested in flight training should refer to Marine Corps Order 1520.4.

proper method of attempting to locate him.

Duty Officers Extensions

CNATRA—3245	Marine OOD—6202
CNABATRA—7253	Whiting
Hospital—5211	OOD—94-437
Pre-Flight—7280	Ellyson
Sch. Av.	OOD—97-227
Med.—7165	Saufley
	OOD—98-227

Sports and Recreation—Intramural Program: All activities in the Naval Air Basic Training Command conduct an intramural program of both league and tournament sports. The intramural sports program is normally played before the NABTC Athletic Conference. The following sports are normally planned: golf, tennis, bowling, basketball swimming, pistol, and badminton. The announcing of schedules, coordinating and supervising of the intramural program is done through the Special Services Offices.

Naval Air Basic Training Command Athletic Conference — The NABTC Athletic Conference is an extensive Intramural athletic program of league and tournament sports for all activities in the Pensacola area. Normally, a series of matches are played among the commands that compose the NABTC. These sports are usually:

Bowling	January and February League Sport
Basketball	Nov., Dec. and Jan. League Sport
Golf	March through June League Sport
Softball	April through June League Sport
Pistol	April through May League Sport
Tennis	Tournament announced (March)
Swimming	Tournament announced (August)
Volleyball	Tournament announced (September)

Each activity sponsors a team in the NABTC conference. The Naval Air Basic Training Command sponsors a varsity team in the following sports: football, baseball, basketball, golf, tennis, pistol, bowling, gymnastics and softball. The above varsity sports teams are composed of participants from the area and members of the NABTC athletic conference, except gymnastics and football. The varsity team competes with other service teams, colleges and in Navy tournaments.

WHAT'S IN A NAME

NAAS Saufley Field

NAAS Saufley Field, near Pensacola, Fla., is one of two auxiliary air stations of the Naval Air Station, Pensacola, Fla.

It is named for LTJG Richard C. Saufley, Naval Aviator No. 14, who was killed in an airplane crash off Santa Rosa Island while attempting to break an endurance record of eight hours and 43 minutes set by himself in a pusher-type aircraft. At the time of the crash, he had already been aloft eight hours and 51 minutes. Earlier, in 1916, LTJG Saufley had set an altitude record of 16,072 feet in a pusher-type seaplane.

Saufley Field was opened in August of 1940. It is the second oldest of the auxiliary air stations under the command of Rear Admiral Joseph M. Carson, Chief of Naval Air Basic Training. It has six paved, directional runways. The field is located on Saufley Field Road about 10 miles from downtown Pensacola.

The basic mission of Saufley Field has always been to train naval aviators. In the fulfillment of that mission, Saufley has, at one time or another performed nearly all phases of flight training except preflight. Currently, Saufley conducts both primary flight training and carrier qualifications.

The basic training groups at Saufley are organized like an operational Air Group. At Saufley, however, the squadrons comprise a Training Group. The system familiarizes flight students with the command organization they will encounter in the Fleet.

Saufley Field was purchased from local residents for $26,000. It was then known as Felton Field (it had been Felton's Farm) but was soon officially named Saufley Field. This followed a precedent set by other area commands to name air stations for pioneers of naval aviation.

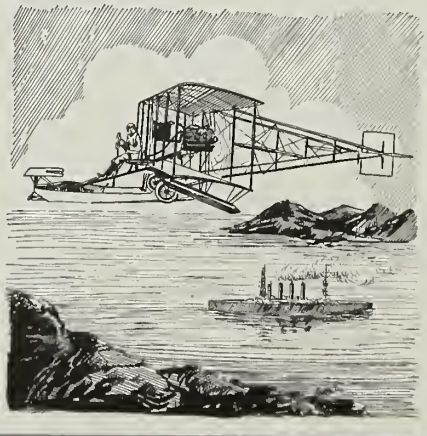
In September 1940, 100 SNJ aircraft and 35 Link trainers were moved to Saufley. These made up an instrument flying school. Later, in November 1940, a primary training squadron was established. They used N2S and N3N aircraft. In November 1941 a second primary squadron was established.

Until 1 Mar 1943, Saufley was merely an outlying field of NAS Pensacola. On that date, however, it was commissioned as an Auxiliary Air Station, the same designation it holds today.

In 1945, the carrier qualifications training unit moved from NAS Glenview, Ill., to Saufley. This later moved to nearby Corry Field, only to return to Saufley when that field was decommissioned.

For the past 13 years, Saufley has seen squadrons come and go, the old SNJ phased out in favor of the T-28, several new commanding officers, and just recently, the first U.S. all-jet basic training program started.

Saufley Field, even today, continues to incorporate modern ideas with modern equipment to help train the best pilots in the world.



New Correspondence Course Ready for Lithographers

One new Enlisted Correspondence Course is now available, and two courses have been discontinued by the Correspondence Course Center.

Enlisted Correspondence Courses for active duty personnel will be administered (with certain exceptions) by your local command instead of by the Correspondence Course Center. Your Division Officer will advise you whether the course for which you have applied is suitable to your rate and to the training program you are following. If it is, he will see that your application (NavPers 231) is forwarded to the Correspondence Course Center, which will supply the course and materials to your command.

Personnel on inactive duty will have courses handled by the Center.

New Course

Title	*NavPers No.*
Lithographer 1 and C	91475-1

This course may be retaken for repeat Naval Reserve credit.

Discontinued Courses

Title	*NavPers No.*
Lithographer 1	91474-A
Lithographer C	91475

Changes in Special Allowances For Navymen on Overseas Duty

Special allowances paid to many servicemen permanently assigned overseas have been amended. In nearly all areas the amount of the allowances was changed. Some were increased; others were decreased. A few remained the same.

These allowances are payable when quarters are not available to the member or, if his dependents are with him, if no quarters are available for the dependents; and when messing facilities are not available to him (or to his dependents, if they're with him), or when a man not accompanied by dependents is authorized to mess separately.

Under the new allowance system, rates vary within an area both with the man's grade and the number of his dependents. Formerly the only distinction was between officers and enlisted men, and with or without dependents.

With the allowance changes, there also came a change in terminology. So that both *Joint Travel Regulations* and *Navy Travel Instructions* may agree in the use of certain terms, here's the way the following terms in Navy Travel Instructions should be construed:

Old Term	*New Term*
Cost-of-living allowances (a general term covering all overseas living allowances)	Station allowances
Station allowance for subsistence	Cost-of-living allowance
Station allowance for quarters	Housing allowance

A complete list of the new overseas allowances and per diem rates are included in Change 77 to *Joint Travel Regulations*. A change in Procedure for paying overseas allowances is contained in SecNav Notice 7220 of 31 Dec 58.

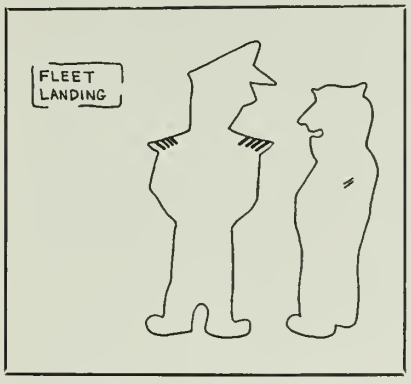
Regulations Set on Wearing Of Navy Dinner Jackets

Effective 1 Jul 1959 both the Dinner Dress Blue Jacket Uniform and the Dinner Dress White Jacket Uniform will be required uniforms in the wardrobe of Regular Navy officers in the grades of commander and above.

For Regular officers, LCDR and below, and for all Reserve officers, these uniforms will be optional.

This change will be incorporated in a revised edition of *Navy Uniform Regulations* which is to be published in the near future. It was announced in BuPers Notice 1020, 6 Mar '59.

All-Navy Cartoon Contest
F. W. Brown, YN1, USN



"How about a ride in y'er gig?"

Civilian Group Elects Nav Cad of the Year

LTJG Elmer E. Wilken, USNR, of Chattanooga, Tenn., a 25-year-old Golden Gloves boxing champion, has been named "Naval Aviation Cadet of the year." He received the National Society of the Daughters of American Colonists' award at the society's 38th annual general assembly in Wahington, D.C., in April.

LTJG Wilken earned the highest final over-all standard score of all cadets who graduated from Navy Flight Training at Pensacola, Fla., during calendar year 1958. The selection was based on grades in three areas—flight proficiency, academic instruction and officer-like qualities.

Before he began flying with the Navy, Wilken attended the University of Miami for three years. It was during his stay there that he won the Southern Florida Golden Gloves championship.

After he left the university, he joined a flying school in Kendall, Fla. He earned his CAA commercial pilot's license and flew as a co-pilot for a commercial air line.

After he finished his Navy training in January 1958, he was assigned to Fleet Air Service Squadron 104 in Port Lyautey, Morocco. He is assistant Operations Officer of the squadron as well as Air Frames Officer, Ground Defense Officer and Athletic Officer.

He stopped in Washington, D.C., to receive his cadet award while en route to advanced training in swept-wing jet aircraft here in the United States. After completion of this advanced training, he will return to his squadron in Africa.

Latest List of Motion Pictures Available for Distribution To Ships and Overseas Bases

The latest list of 16-mm. feature movies available from the Navy Motion Picture Service, Bldg. 311, Naval Base, Brooklyn 1, N. Y., is published here for the convenience of ships and overseas bases. The title of each picture is followed by the program number.

Those in color are designated by (C) and those in wide-screen processes by (WS). Distribution began in April.

These films are leased from the movie industry and distributed free to ships and most overseas activities under the Fleet Motion Picture Plan.

Roots of Heaven (1279) (C) (WS): Drama; Errol Flynn, Juliette Greco.

Inn of the Sixth Happiness (1280) (C) (WS): Drama; Ingrid Bergman, Curt Jurgens.

Westbound (1281) (C): Western; Randolph Scott, Virginia Mayo.

Anna Lucasta (1282): Drama; Eartha Kitt, Frederick O'Neal.

Intent to Kill (1283) (WS): Drama; Richard Todd, Betsy Drake.

Frontier Rangers (1284) (C): Western; Keith Larsen, Buddy Ebsen.

Tokyo After Dark (1285): War Drama; Michi Kobi, Richard Long.

Old Man and the Sea (1286) (C): Classic; Spencer Tracy, Felepe Pazos.

The Man Inside (1287) (WS): Drama; Jack Palance, Anita Ekberg.

Lone Texan (1288) (WS): Western; Willard Parker, Grant Williams.

The Blob (1289) (C): Science-Fiction; Steven McQueen, Aneta Corseaut.

Watusi (1290) (C): Adventure Drama; George Montgomery, Taina Elg.

The Journey (1291) (C): Drama; Deborah Kerr, Yul Brynner.

White Wilderness (1292) (C): Documentary; True Life Adventure.

House on Haunted Hill (1293): Mystery, Vincent Price, Carol Ohmart.

City of Fear (1294): Drama; Vince Edwards, John Archer.

BOOKS

FLYING BOOK SHELF FOR THE AIR-MINDED NAVYMAN

YOUR NAVY AND MARINE CORPS ship and shore station libraries have the latest on naval aviation: Reference and technical books on aeronautical science, aircraft operation and maintenance, aviation equipment, instruments, air navigation and meteorology.

Also in these libraries are many books to give Navymen a broad background in the history and development of aviation, air power, strategy and tactics—and famous naval and Marine Corps air actions. Listed below are a few of the many non-technical and historical books on aviation. All books will not be available in every library, but you should find a selection of interesting titles in each library.

This is not, of course, a complete list. Some of the famous accounts and possibly your favorite titles may not be listed here. That may be due to the fact that these books are out of print, or otherwise not available.

Aircraft

Ships and Aircraft of the U.S. Fleet, by James C. Fahey. Published 1958. Basic information for the expert or the man who's just interested.

The Air Forces of the World, by William Green and John Fricker. Published 1959. History, development and present strength.

The World's Fighting Planes, by William Green and Gerald Pollinger. Published 1957. A factual roundup.

Jane's All the World's Aircraft, 1958-59 edition. Encyclopaedic in scope.

British Naval Aircraft, 1912-1958, by Owen Thetford. Published 1958.

Aviation History

Wings at Sea, by Charles Coombs. Published 1958. Well illustrated account of carriers, jets and naval aviation training.

Air Base, by Boone T. Guyton. Published 1941. A navy dive bombing pilot's experiences before World War II.

Lifeline in the Sky, by Clayton Knight. Published 1957. The story of the U.S. Military Air Transport Service.

Into the Silk, by Ian Mackersey. Published 1958. Describes successful emergency jumps from airplanes in peace and war.

Ceiling Unlimited, by Lloyd Morris and Kendall Smith. Published 1953. American aviation from Kitty Hawk to supersonics.

The Navy Has Wings, by Fletcher Pratt. Published 1943. Training the naval aviator during World War II.

They Fought for the Sky, by Quentin J. Reynolds. Published 1957. Military aviation in World War I, including the zeppelins, airplanes and the fliers on both sides.

Navy Wings, by Harold B. Miller. Published 1942. A nostalgic reminder of the not-so-distant past.

Ships in the Sky, by John Toland. Published 1957. The story of the great dirigibles.

History of United States Naval Aviation, by Archibald D. Turnbull and Clifford L. Lord. Published 1949.

Air Power Today

Air Operations in Naval Warfare, Reading Supplement, by Walter C. Blattman. Published 1957.

Air Power: Key to Survival, by Alexander P. De Seversky. Published 1950. An exposition by a leading advocate of air power.

Victory Without War, 1958-1961, by George F. Eliot. Published 1958. Points up the importance for the U.S. of the carrier-based nuclear striking power.

Impact of Airpower, by Eugene Emme. Published 1959. An anthology covering historical growth, meaning and strategical concepts of air power.

Air Power, by Asher Lee. Published 1956. Summarizes the different functions of air power and its use.

The Soviet Air and Rocket Forces, edited by Asher Lee. Published 1959. A military analysis of the revolution in, and present status of, Russian air power.

Airpower: The Decisive Force in Korea, edited by James T. Stewart. Published 1957.

The Great Deterrent, by John Slessor. Published 1958. An authority on air power discusses the development of strategic policy in the nuclear age.

World War II and Korean Actions

Then There Was One, by Eugene Burns. Published 1944. uss *Enterprise* during World War II.

Midway, The Battle That Doomed Japan, by Mitsuo Fuchida and Masatake Okumiya. Published 1955. The battle as seen from the Japanese Navy's point of view.

Clear the Decks, by Daniel V. Gallery. Published 1951. A naval aviator's account of operations against the Germans in the Atlantic.

The Divine Wind, by Rikihei Inoguchi and others. Published 1958. The story of the Japanese Kamikaze Corps.

Queen of the Flat-Tops, by Stanley Johnston. Published 1942. uss *Lexington* and the Coral Sea Battle.

Cavalry of the Sky, by Lynn Montross. Published 1954. The U.S. Marine combat helicopter's history and tactical battle development in Korea.

I Was Chaplain on the Franklin, by Joseph T. O'Callahan. Published 1956. Heroic story of the "ship that would not die."

Zero, by Mastake Okumiya and Jiro Horikoshi. Published 1956. Japanese naval air operations from 1937 to 1945 as told by a flying officer and the designer of the Zero fighting plane.

Combat Command, by Frederick Sherman. Published 1950. Naval warfare from Pearl Harbor to the surrender with the carrier seen as a decisive weapon.

History of Marine Corps Aviation in World War II, by Robert Sherrod. Published 1952.

Marine Aviation in the Philippines. Edited and published in 1951 by the U.S. Marine Corps.

Air Spy, by Constance B. Smith. Published 1957. The story of air-photo intelligence.

Blue Ghost, by Edward Steichen. Published 1947. A master picture taker's photographic log aboard uss *Lexington*.

Biography

Come North With Me, (Autobiography) by Bernt Balchen. Published 1958. A fascinating flying career that included expeditions to both poles.

Five Down and Glory, by Gene Gurney. Published 1958. A history of the American air aces.

Admiral Halsey's Story, by William F. Halsey and J. Bryan. Published 1947.

I Took the Skyroad, by Norman M. Miller. Published 1945. A Navy bomber squadron commander's life story.

Samurai!, by Saburo Sakai. Published 1957. A leading Japanese naval pilot describes his training and fighting experiences.

ALL HANDS
BOOK
SUPPLEMENT

PENSACOLA-CRADLE OF NAVAL AVIATION

From 1914, when Pensacola was first officially designated as a naval air station, the destiny of that establishment has been inextricably woven about the history of naval aviation itself. Thus, although this supplement is primarily concerned with the history of NAS Pensacola, it must of necessity tell the story, in part, of naval aviation.

Although loyal Pensacolans stubbornly insist that the founding of their city preceded that of St. Augustine, Fla. (which, in turn, claims to be the oldest city in North America) by six years, the history of Pensacola really begins with the permanent colonization of the area by Spain in 1693.

It's simply a matter of viewpoint. In 1559, the Spanish explorer Tristan de Luna and 2000 followers is said (by Pensacolans) to have established near what is now Pensacola the first white settlement in the New World. Two years later, however, intramural disagreements caused the white man's hope to go the way of the many young colonies. It was not until 135 years later that the city was resettled by the Spaniards. From that time on it was to continue under varying regimes, to the present.

In 1718 Pensacola was captured by the French and then, within two years, the Spaniards were again in control. The city remained in their hands until, as a result of behind-the-scenes negotiations, it was turned over to the British. By 1781, it was back again under control of Spain where it remained until 1821, when Florida was ceded to the United States.

In 1824, when Congress selected Pensacola as a site for a Navy Yard (the only one on the Gulf coast), the population of the city and surrounding county of Escambia was a rousing 2518.

At the outbreak of the Civil War the Navy Yard and all the forts surrounding it except Fort Pickens on Santa Rosa Island, were seized by the Confederacy.

In 1913 the Secretary of the Navy appointed a board to examine possible sites for the first naval air station. The board unanimously chose Pensacola. It is at this point that the true history of NAS Pensacola begins.

NAVAL AVIATION may be said to have had its birth on 25 Mar 1898 when Theodore Roosevelt, then Assistant Secretary of the Navy, sent the following memo to SecNav Long: "The machine has worked. It seems to me worthwhile for this government to try whether it will not work on a large enough scale to be of use in the event of war."

Here are some other highlights on early naval aviation before Pensacola entered the picture:

The Navy took official cognizance of aviation in 1910 when Captain W. I. Chambers was given duty in connection with the study of aviation in the Navy Department, and Lieutenant T. G. Ellyson was ordered to San Diego for instruction in flying. Captain Chambers became known as the "Father of Naval Aviation," and LT Ellyson became the first naval aviator. A civilian pilot, Eugene Ely had successfully flown a landplane from a platform built on the bow of USS *Birmingham* at Hampton Roads, Va. In January 1911, Ely landed and successfully flew a plane from the deck of USS *Pennsylvania* lying in San Francisco harbor.

A month later Curtiss, who had perfected a hydroairplane, landed alongside *Pennsylvania* at San Diego, was hoisted aboard, later hoisted out again and flew back to his camp. This performance gave a very decided impetus to the development of naval aviation. As a result of Captain Chambers' recommendations, the first aviation appropriation of $25,000 was included in the 1911-12 naval appropriation act. Contracts were let for three heavier-than-air craft.

The year 1912 saw the development of the catapult

From *Pirates to Pilots*, 1959, compiled under the auspices of the Service Information Office, NAS Pensacola.

SEAPLANES line up along beach at Pensacola Naval Air Station in 1917 waiting for Saturday morning inspection.

designed at the Washington Navy Yard. The first shot that was attempted with LT Ellyson as pilot at Annapolis was not successful, but he later accomplished the feat from a float at the Washington Navy Yard.

IN THE AUTUMN OF 1913, a Board was appointed with Captain Chambers as chairman to determine, among other things, a satisfactory site for the establishment of a permanent Naval Air Station. This board decided upon the reopening of the Navy Yard at Pensacola. The recommendation was carried out in 1914.

LCDR Henry C. Mustin was ordered to command USS *Mississippi*—which was designated to serve as station ship at Pensacola—and so became the first commanding officer of NAS Pensacola.

The beginning was not auspicious. The sandy beach was spotted with scrapped cement blocks and decayed docks. Pine stumps projected all over the Yard. A rutted irregular sandy track led the long 12 miles through the pines and blackjack to the city of Pensacola. In this setting, with nine planes, six qualified pilots and 23 enlisted men, NAS Pensacola had its beginning.

TRAINING was interrupted in April 1914 by the outbreak of trouble at Veracruz and Tampico, and planes were sent to the area on USS *Birmingham* and *Mississippi*. At Veracruz, the planes proved their worth by conducting reconnaissance flights of value to future landing parties. While shooting pictures from the air, LT P. N. L. Bellinger drew rifle fire from the ground forces and thus achieved the dubious distinction of flying home with bullet holes in his plane.

The event proved a belief earlier held but never proven—that rifles would not bring a plane down unless the pilot, the fuel tank or engine was hit.

The aviators had no sooner returned from Mexico than the beginning of World War I sent most of them —inadvertently—overseas. *Mississippi* had been sold to Greece and her assigned relief to Pensacola, USS *North Carolina,* had hardly been equipped and manned when, she too, was rushed to Europe without waiting to disembark her aviation personnel.

During 1915, the first Navy-designed seaplane was built at the Washington Navy Yard and on April 20th, the Navy ordered its first airship. Also in 1915, the first catapult flight from a ship underway was made from *North Carolina* by then LCDR Mustin.

DURING THIS PERIOD, appropriatons for naval aviation were very small. It was often necessary for officers engaged in flying to pay out of their own pocket for gasoline, oil and spare parts if they wanted to keep flying. The first real class in aviation consisted of 10 Naval and Marine officers ordered to Pensacola in 1915. Training up to this time depended entirely on the ideas of the individual officer in charge of training. In the winter of 1915-16, training was established along definite lines.

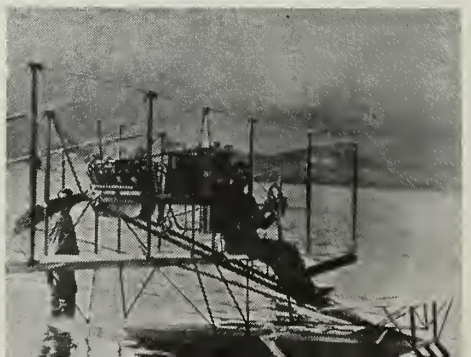
In the summer of 1916, what is said to be the first separate appropriation for naval aviation, amounting to $1,000,000, was made by Congress—quite a jump from the $10,000 of the year before. In December, the N-9 seaplane was adopted for training.

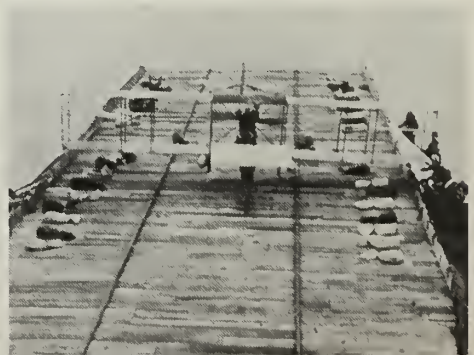
While awaiting delivery of the new N-9 training planes, operations at Pensacola were at a low ebb. Students who were not qualified continued their work intermittently, but no concerted efforts were carried out. However, experimental flights continued to be made. Bellinger was successful in dropping live bombs from a tailless plane and the first machinegun to be carried aloft by a Navy plane was mounted in the same craft. With the delivery of the N-9s, training once more began to take precedence and the powerful N-9s won immediate favor among the pilots, although they cautioned one another about its excess power and performance. One had to become used to it by easy stages.

THERE WAS ONE AFTERNOON when the lookout in the watchtower was alarmed to see a student flying directly toward the beach where the seaplanes were secured. The sentry waited as long as he dared and then sounded the crash alarm. The siren sang its warning and the din was increased by blasts on the powerhouse whistle. All hands rushed out to see the cause.

The N-9 rushed at them blindly. The student pilot

PIONEERS—Ely takes off (1910). Ellyson *(center)*, first Navy pilot, and plane. *Rt:* First shipboard landing, 1911.





finally closed his throttle and, presumably, opened his eyes. Startled at the swiftly approaching beach, he pulled back on the controls enough to clear the heads of the spectators who had thrown themselves on the ground. The plane had sufficient speed to leap directly into the wide-open doors of a hangar where, with insufficient clearance, the wings lodged themselves. The plane remained suspended some 20 feet from the ground. The pilot climbed down by ladder and departed the field of naval aviation.

IN THE LATTER PART of 1916, in anticipation of trouble, naval aviation was expanded. Certain enlisted men were detailed for instruction with the result that when the country entered the war in April 1917 there were 48 officers and 239 men assigned to aviation, Navy and Marine Corps combined.

Pensacola was the only station in operation at the entry into the war. With the entrance of the U. S. into the war, the expansion of the station was phenomenal. Students who knew how to fly were taught how to fight in the air. Twin-engine flying boat instruction, bombing, gunnery, navigation, photography, spotting and the routine involved in this work employed 438 officers and 5559 men at the time the Armistice was signed. Over 200 seaplanes, dirigibles and free kite balloons were housed in steel and wooden hangars stretching over a mile down the beach. Many new structures were built, including hangars, barracks, a new concrete quay, concrete walks and roads, gas tanks, a covered boat shed and crane. During this period, the air station grew from obscurity to one of the greatest naval air bases in the world.

With the declaration of war, the city of Pensacola came to life. The station swarmed with newly-enlisted Navymen. Until a sufficient number of training planes arrived, however, there was much confusion.

By summer the station was operating at full capacity. The roar of engines filled the air from daylight to dark with time only to change pilots. When the sun had set, the last machine came into the beach where it was run into the hangar so that engines could be checked and repaired during the night.

THE LENGTH OF THE FLIGHT COURSE was reduced from 18 to nine months. However, the demand for pilots overseas became such that as time went on a student aviator who had from 25 to 50 hours flight time and who, in the opinion of his instructor, was capable of soloing, was designated a naval aviator. The student of one day was, literally, the instructor of the next.

The phenomenon of the stall was known, although there were few instructors who were willing to place their machines deliberately in a spin to demonstrate their ability to regain control. The student was instructed to keep his machine flying at a speed which caused the wires to whistle sharply. He was told: "If the wires don't sing to you, the angels will."

MOTORMEN—Forerunners of today's Aviation Machinist's Mates check engine in test stand at Pensacola in 1917.

It had been proved that, theoretically, the heavy seaplane could not be looped. Some people refuse to be lieve what they are told. LT Francis T. Evans, of the Marine Corps, was of this type. In February 1917 he had taken off in an N-9 and defied mathematical calculations by looping as well as spinning the machine—successfully. For this violation of what "everyone knows," he was later awarded the Distinguished Flying Cross.

Before 1916, the Navy had spent only $1,000,000 on aviation but during the war, $143,000,000 was expended. When the U. S. entered the war the Navy possessed but one aircraft station, a handful of training seaplanes with none fit for combat use, and lighter-than-air equipment that was negligible. It had 38 naval aviators.

When the Armistice was signed, there were in operation 28 U. S. Naval Air Stations in Europe, 13 in the United States, (including one in the Canal Zone), one in the Azores, one in Canada and eight land-plane squadrons for special offensive operations against submarines at their bases, not to mention the numerous schools, storehouses, and the Naval Aircraft Factory. Aviation personnel, at the close of hostilities, had reached a total of 40,000—more than two-thirds the entire naval personnel before our entry into the war.

SUCCESSFUL CAT launching made in 1912. Navy airmen in 1916 move out seaplane. Pilot leaves Pensacola, 1917.

Pensacola's Fort Pickens

Fort Pickens on Santa Rosa Island in Pensacola Bay is a relic of a coast defense system rendered obsolete by the invention of rifled cannon and armored battleships. The works were built to defend the deepwater harbor of Pensacola against foreign attack, but the only time Pickens was ever under fire was during the Civil War when Federal troops manned its guns. It was one of the three southern forts that the Confederates were unable to seize.

Plans for the fortification were projected as early as 1822 in anticipation of the selection of Pensacola as the principal United States Naval Depot on the Gulf of Mexico. The fortifications later named Fort Pickens, Fort McRee and Fort Barrancas (which means broken landscape) were built in that order between 1829 and 1844.

Fort Pickens was begun in June 1829 and completed 21 Oct. 1834, when it was garrisoned by an artillery company of 34 men. The fort was pentagonal in shape with a bastion at each of the corners and was complete with covert ways, a dry ditch and glacis or bank of earth in front having an easy slope toward the fields. Its brick walls, 40 feet high and 12 feet thick, were embrasured for two tiers of guns in bombproof casements and one tier open or en barbette. It was designed to mount 25 guns and to accommodate a garrison of 600 men during ordinary warfare or 1200 men under siege. A garrison of 50 men was considered sufficient in time of peace. During most of the time between its completion and the Civil War, the fort lacked even that modest complement and at the war's outset it had been unoccupied for 10 years.

Fort Pickens was used as a prison for military and political prisoners during the latter part of the war. The return of peace brought a withdrawal of its garrison with the exception of an ordnance sergeant who was assigned as caretaker. In 1875 Congress repaired the fort which appears to have been garrisoned and used as a military prison. The Apache Chief, Geronimo, and his band, were imprisoned at Fort Pickens between 1886-88.

It served as an active defense fortification during the Spanish-American War, and was also activated during both World Wars. After World War II Fort Pickens was declared to be surplus property. In 1949, Fort Pickens was presented to the Florida Board of Parks.

AS SOON AFTER the Armistice as February 1919, a squadron of H-16 flying boats was sent to the Fleet wintering at Guantanamo. In the summer of 1919, the Pacific Fleet Air Detachment was organized. The following winter the air force of both Fleets accompanied their Fleets on the winter cruises and took an active part in the tactical problems and gunnery exercises and in the joint rendezvous at Panama.

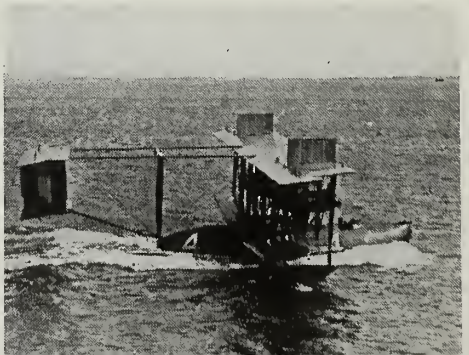
During the war it had become apparent that if naval aviators were trained in landplanes as well as in seaplanes, there would be no limit to the training possibilities at Pensacola. Furthermore, it was reasoned that naval aviators would have to be trained in landplanes if the aircraft carrier was to become a reality.

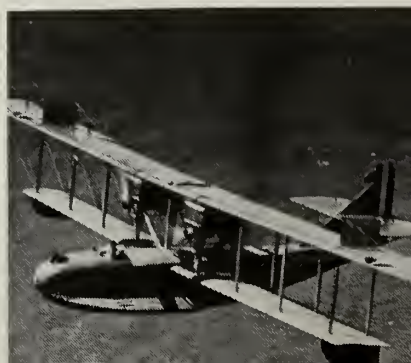
Thus, most of the town of Woolsey, which was located on the present site of Chevalier Field, was razed in 1920 and 1921 and the training center's first field was created. To enlarge the facilities of Station Field, as Chevalier was then called, the city of Pensacola acquired property north of the city and made it available to the station as a practice field. This was the original Corry Field.

MEANWHILE, USS JUPITER, a collier, was converted into USS *Langley*, the Navy's first aircraft carrier. After her commissioning in Norfolk on 20 Mar 1922, *Langley* steamed south and during the next several months conducted numerous experiments in the vicinity of Pensacola. By 1923, the captain of *Langley* reported that he could handle with reasonable safety three heavy planes in seven minutes.

In 1922, the Bureau of Aeronautics proposed that every battleship and cruiser should have two fighter planes and two observation planes while each destroyer leader, each first class destroyer and each submarine of

FLYING BOATS like these twin engined jobs made history at Pensacola. (left to right) F5L, NC No. 4, and H-16 boats.





cruising size should have one plane of each type. On aircraft tenders there were to be four observation planes and 12 patrol planes, and the complement for future carriers was established at 30 fighters and as many observers, 15 scouts and 15 torpedo planes.

It didn't quite work out that way. In 1926, Congress authorized a five-year program which aimed for 1000 planes and two dirigibles. Also urged was the building of one 13,000-ton carrier in each of the next five years, but only one, USS *Ranger* (CV 4) was commissioned. In 1927 Lindbergh and Byrd flew the Atlantic and *Saratoga* (CV 3) and *Lexington* (CV 2) were commissioned. The NY replaced the N-9 as the basic training plane at Pensacola. Two years earlier, Station Field had been expanded from its original 25 acres to a robust 62 acres.

BACK AT BUAER, there were personnel problems. The Act of 1926 had made no provision for additional men to meet the 1000-plane program.

The proposal was made that the quality of enlisted men reporting for instruction at Pensacola would be improved if they had already passed through a screening at Hampton Roads or San Diego. After a 10-hour elimination course, those who passed went to Pensacola while those who failed took 10 weeks of training at Great Lakes, followed by six months of aviation afloat, and if finally found qualified went to Pensacola in their turn. This lasted until the recommendation for the acceptance of enlistments for aviation duty only.

This was followed by the buildup of the Aviation Reserve.

Since most of the young Reserves had been taught how to fly the old N-9, the discovery of the great difference in the newer planes was a strong indication of the need for bringing Reserve training up to date. A refresher course was established at Pensacola for Reserve officers who could qualify as instructors after taking it. In addition, more advanced courses, lasting 60 days and including 100 hours of flying, were established with the understanding that Reserves who did well in these would become eligible for one year's active service with the Fleet.

By 1930, it became evident that the original Navy Yard behind its original walls was not large enough to house all the facilities of the expanding naval air station. On August 7 of that year, the razing of the town of Warrington, which lay to the west of the wall, was begun. Residences, churches, schools, lodges and garages were removed. Many were demolished altogether, but some of them were moved across Bayou Grande and rebuilt in the present community of Warrington. One building still standing from Old Warrington is Building 191, the present headquarters of the air station band. It used to be a grocery store.

KITE BALLOON taken from hangar at Pensacola, WW I.

Pensacola Lighthouse

An act of Congress in 1823 appropriated $6000 for the erection of the Pensacola Lighthouse. Jeremiah Ingraham was appointed keeper in 1824 and served until his death in 1840. He was succeeded by his wife who served until 1855.

The height of the tower was 80 feet above the sea. In October 1853 the Commandant of the Navy Yard recommended that either the lighthouse be made 20 or 25 feet higher or a new one built. He had reached the conclusion that points at sea were concealed by the lofty pines on the coast. The next year Congress appropriated $25,000 for rebuilding the lighthouse and elevating the illuminating apparatus. The lighthouse and new set of ranges were completed and lighted 1 Jan 1859. The height of the light above sea level was now 210 feet.

During the Civil War the tower was struck many times by solid shot.

During the 1870s the lighthouse endured several attacks by the weather. Twice it was struck by lightning with considerable damage done to the brick masonry of the covered way between the keeper's dwelling and the tower. In 1877 a tornado damaged the slate roof of the keeper's house and it was replaced by a shingle roof. In 1878 it was discovered that the tower was cracked inside, beneath the lantern. During the war the tower had been struck and it is possible that some of the hurricanes since that time were beginning to make the effects of the shots visible. The next year $5000 was spent for repairs and in 1884 mineral oil lamps were installed.

Today Pensacola Lighthouse stands 171 feet above the ground and 191 feet above the water. The 400,000-candlepower electric light, flashing every 20 seconds for two seconds, is visible for 20 miles.

TAFFRAIL TALK

ALL HANDS will never be the same again. Tom Wholey, JOC, USN (Ret.), who hit his 19 and six in May is getting ready to make his contribution to the Navy as a civilian. His place on the News Desk is being filled—and very well, too, thank you—by Jerry McConnell, JO1, USN, who arrived on deck fresh from four years with Submarine Force, Pacific. Milestones in his career have included to date, such spots as Fleet Home Town News Center, Great Lakes, Ill., San Francisco, Kwajalein, and San Diego.

And you had better appreciate Patrick's gags while you may for, at the moment, he is preparing for a long, slow trek across country with wife and youngsters before embarking for Subic Bay and Olongapo. To the best of our knowledge, Pat is the only DC1 who is as good an illustrator as he is a Damage Controlman.

We are firmly convinced that no one can ever (and who would want to?) take the place of Pat, but we think we have a close second in Guirino (Jerry to us) Paluzzi, DM1, USN. He's as familiar with the East Coast as McConnell is with the West Coast. Patuxent, ComAirLant and LSM 446, were his haunts before ALL HANDS.

° ° °

Speaking of uniqueness, we refer you to the sad case of the lad who is still trying to figure out whether he's really 21 or 22 years old, or is it only 20? Or did he celebrate his 21st and 22nd birthday on the same day? Here are the facts, gentlemen.

Jerry M. Ratcliffe, BTFN, USN, was serving on board USS *Renville* (APA 227) back in 1957 when the westbound attack transport crossed the International Dateline just in time to deprive him of his 20th birthday. However, in 1959, while returning from a tour of duty in the Western Pacific, *Renville* and Ratcliffe crossed the International Dateline heading in the opposite direction—also on his birthday.

° ° °

So you think Ratcliffe's got problems? Consider the harrowing afternoon of T. A. Tuazon, JO3, on the day of his graduation from boot camp, San Diego. We weren't there ourselves, but this is how he reported the debacle to The *Crossroads*, Guam:

I was nervous, to say the least, for in spite of my being the Recruit Brigade Commander, I was a mere seaman recruit. Moreover, at the start of the parade, when my staff—a bugler and an adjutant—and I were in front of the reviewing stand, instead of saying "Right, face!" I sang out "About, face!"

The bugler and adjutant, however, disregarded my command and executed the proper turn, but I tarried too conspicuously long before making my turn. This sign of nervousness apparently infected one battalion guidon bearer, who later dropped his guidon twice.

All this was bad enough, but to compound the seriousness, the reviewing officer just happened to be ADM Arleigh A. Burke, Chief of Naval Operations.

That was why, when ADM Burke shook my hand and commended me for "A fine job," I could only mutter something like "Oh, but we made some mistakes, sir."

To that, he winked and said: "That's all right, son, you recovered quite well. To do such a diffult job right, you've got to make some mistakes."

He's a fine man, that Admiral Burke.

The United States Navy

Guardian of our Country

The United States Navy is responsible for maintaining control of the sea and is a ready force on watch at home and overseas, capable of strong action to preserve the peace or of instant offensive action to win in war.

It is upon the maintenance of this control that our country's glorious future depends. The United States Navy exists to make it so.

We Serve with Honor

Tradition, valor and victory are the Navy's heritage from the past. To these may be added dedication, discipline and vigilance as the watchwords of the present and future. At home or on distant stations, we serve with pride, confident in the respect of our country, our shipmates, and our families. Our responsibilities sober us; our adversities strengthen us.

Service to God and Country is our special privilege. We serve with honor.

The Future of the Navy

The Navy will always employ new weapons, new techniques and greater power to protect and defend the United States on the sea, under the sea, and in the air.

Now and in the future, control of the sea gives the United States her greatest advantage for the maintenance of peace and for victory in war. Mobility, surprise, dispersal and offensive power are the keynotes of the new Navy. The roots of the Navy lie in a strong belief in the future, in continued dedication to our tasks, and in reflection on our heritage from the past. Never have our opportunities and our responsibilities been greater.

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The Bureau should be kept informed of changes in the number of copies required.

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• AT RIGHT: ON GUARD — E. J. Galley, AA, and L. R. Thompson, AA, members of the Crash, Fire and Rescue Team at NAAS Saufley Field, stand by as flight students gain experience in the air.

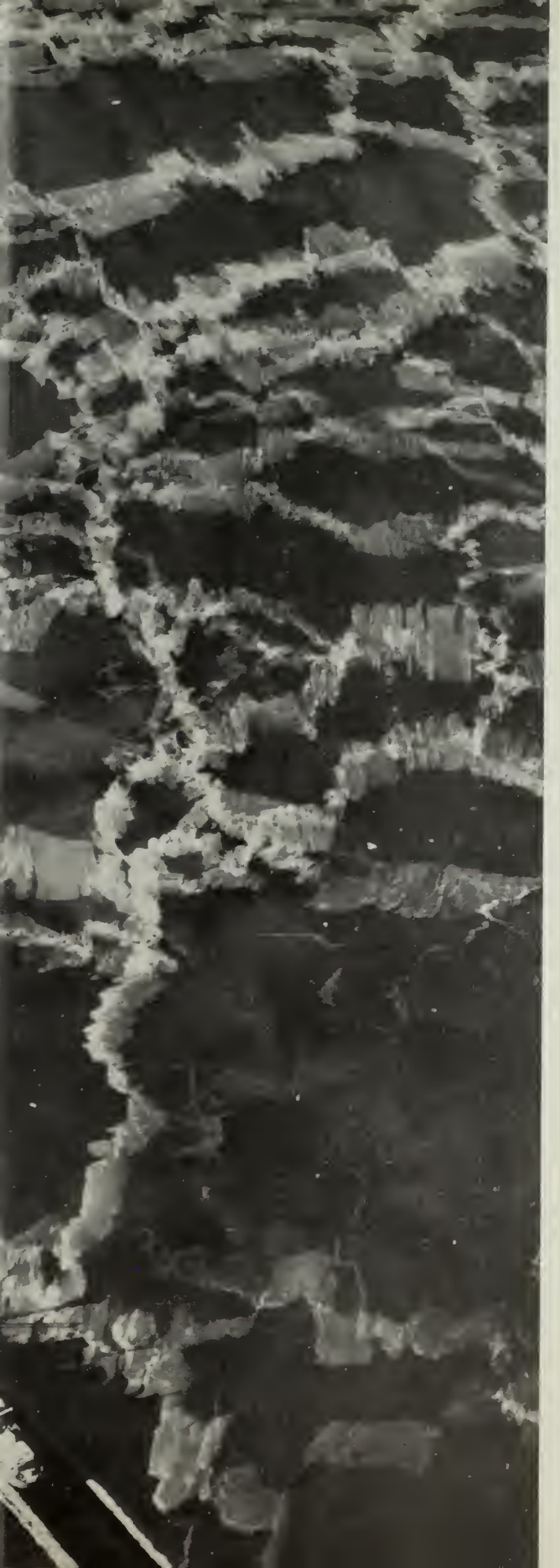
FITNESS FOR FLIGHT

THE NAVY WAY

ALL HANDS

This magazine is intended for 10 readers. All should see it as soon as possible. PASS THIS COPY ALONG

JULY 1959



ALL HANDS

THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN

JULY 1959 Nav-Pers-O NUMBER 510

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• **FRONT COVER: SHOOTING THE WORKS**—Lit up with strings of lights and in full dress while fireworks soar overhead, these ships typify Independence Day celebrations. In this case the port of Cartagena, Spain, is the setting, and the ships are USS *Yellowstone*, *Beole*, *Murray* and *McGowon*.

• **AT LEFT: STRANGE PATTERNS**—While supplying research bases in Antarctic, Navy icebreaker, USS *Edisto* (AGB 2), cuts a 'highway' through ice fields for British Scientific Research Ship *RRS John Biscoe* as U. S. Coast Guard icebreaker *Northwind* follows.

• **CREDITS:** All photographs published in ALL HANDS are official Department of Defense Photos unless otherwise designated.

SKATING UNDER

"THE ARCTIC wasn't so friendly this time as it was back in August 1958." This comment from USS *Skate,* SS(N) 578, pretty well summed up the findings of that nuclear submarine's second scientific exploratory cruise under the Arctic ice to the North Pole.

During *Skate's* record-breaking patrol this spring, the Navy's third nuclear submarine found conditions in the Arctic much different from those she found last summer when she made her first polar cruise.

In spite of the severe conditions existing in the Arctic during the winter months, *Skate* broke all previous records for both time and distance in polar under-ice operations —and at the same time proved to the world that the U.S. Navy can now operate in the Far North, regardless of the season.

Last summer, under "ideal conditions for polar operations," *Skate* operated for 10 days and 14 hours under the ice. During that time she traveled 2405 miles and surfaced nine times within the permanent ice pack—once within 40 miles of the North Pole.

During that cruise, *Skate* found that temperatures in the Arctic remain steady (about 32 degrees Fahrenheit). The winds are light, the sky overcast, and the sun hangs low on the horizon of the field of ice.

It was found that none of these conditions varied very much during the summer months.

According to *Skate's* skipper, CDR James F. Calvert, USN, these pleasant summer conditions made navigating in the Arctic no more of a problem than navigating at sea off New London, Conn. "The ice pack was pock-marked with 'lakes' of open water, some small and others half a mile wide, usually elliptical in shape," he explained.

BUT SKATE found conditions somewhat different during the winter cruise she made seven months later.

ICEBREAKER—Sequence of photos shows *USS Skate, SS*(N) 578, as she cracks her way through polar ice cap.

The "lakes were gone. They had frozen over as the mean air temperature was down to 30 degrees below zero—some 60 degrees colder than that registered on *Skate's* first visit. "Only one puddle, two feet wide," was found during the entire 12-day, 3090-mile cruise under the ice. Although this was the only opening that *Skate* found, she broke through the ice pack 10 different times—once exactly at the North Pole.

While the air temperature averaged 30 degrees below zero, the water was comparatively warm. That is, if you call slightly above 32 degrees warm. The wind howled across the ice up to 55 miles an hour and often blew the ice floes apart. This created "leads" or open patches of

ICE

water which froze over at the rate of six inches a day.

Thus, in order to surface, *Skate* had to find these leads and come up through them before they froze solid. When asked about surfacing, CDR Calvert replied, "I cannot discuss the thickness that we broke because it's something other nations would like to know—something that cost us time and money to learn." However, he revealed that when the 264-foot sub surfaced at the North Pole, she broke through ice of sufficient strength to support 30 of her crew.

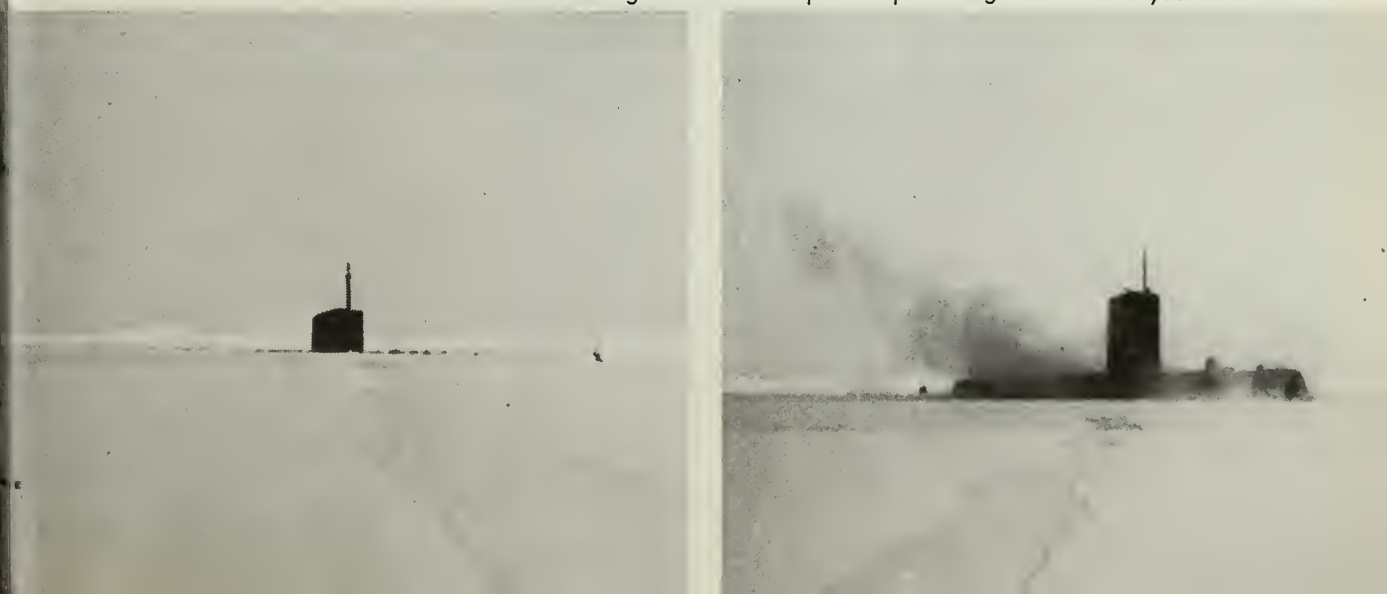
'NIGHT EYES' helped *Skate* find leads to surface through the Arctic ice.

A TELEVISION CAMERA helped *Skate* find the leads in which to surface. The camera was mounted in a shock-proof container on *Skate's* deck and enabled the crew inside the submerged submarine to view the ice overhead. (This radically new seeing device was recently developed by the Army for mounting in tanks to improve fire direction. Only one prototype of this new viewer has been built to date and that was the one used for the first time during *Skate's* second polar exploratory cruise. This equipment was described by CDR Calvert as "a most useful piece of gear.")

In addition to television *Skate* also used a fathomether aimed upward to bounce its beam off the ice in order to take overhead soundings.

Skate and her 106-man crew left New London for her second polar voyage on 4 Mar 1959. Although her

IT'S A FACT—*Skate's* cruise under Arctic ice during bad weather proved polar region could be year-round base.



LAST REQUEST of polar explorer, Sir Hubert Wilkins, was carried out in Arctic night by crew members after they surfaced directly over the pole.

superstructure or "sail" had been strengthened especially for her northern patrol, *Skate* carried no special gear for breaking the ice.

Just 10 days after leaving her home port, *Skate* went under the Arctic ice. Three days later—on 17 March—she surfaced in the ice for the third time, exactly at the North Pole.

AT 0600, IN THE HALF-LIGHT of the polar winter, *Skate's* crew carried out a last wish of the late polar explorer Sir Hubert Wilkins by scattering his ashes amidst huge ice drifts during a raging snowstorm.

Speaking of this historic occasion —which took place just 50 years after Robert E. Peary first reached the North Pole—CDR Calvert said that nothing else in his naval career had matched the drama of this ceremony.

"It was 34 degrees below zero, the wind was blowing hard and the light poor," he said. The ice was piled higher than *Skate's* bridge. "We could see maybe three or four hundred yards in the driving snow. We were quite awed by it all."

About one third of *Skate's* crew went ashore and set flaming red torches in the ice. When the scene was set, they gathered around their commanding officer as he read from the service for the dead. A rifle squad fired the traditional salute over the urn before the explorer's ashes disappeared into the wind and snow.

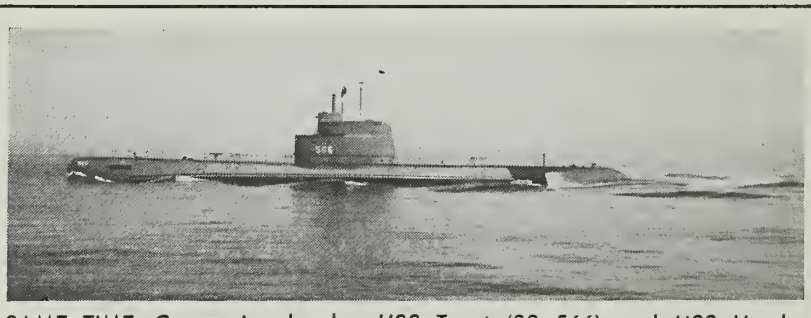
Notes explaining the ceremony in memory of Sir Hubert Wilkins were buried by the crew under a pile of rocks. He had taken part in 24 Arctic expeditions and nine to Antarctica. His one desire was to reach the North Pole—but he never made it on or under the ice. In 1927, however, Sir Hubert succeeded in flying over the Pole, and a year later was knighted by King George V for his feat. In 1931 he attempted what the nuclear sub was to accomplish, sailing in the ex-U.S. Navy submarine 0-12 of World War I vintage, which Wilkins had re-named *Nautilus*. (Sir Hubert died in 1958.)

AFTER THE CEREMONY *Skate* again went into the darkness under the ice and continued to make soundings of the depth of the ocean's floor and studies of "the profile of the ice." In the next seven days the submarine surfaced seven more times.

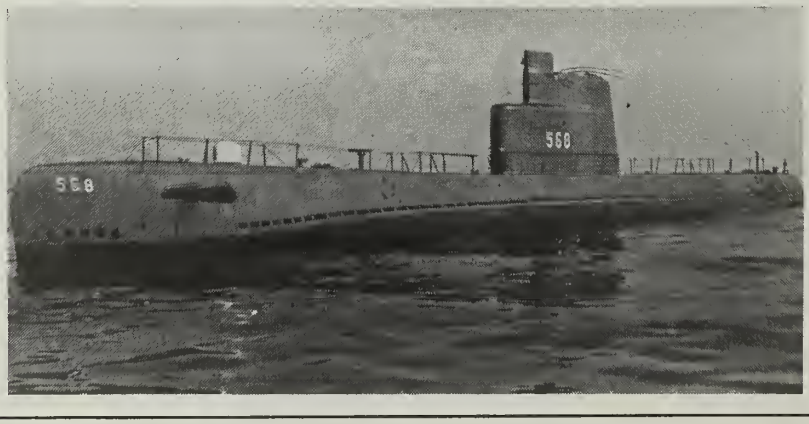
During her entire polar cruise, *Skate* never went within 100 miles of a land mass except during her passage between Spitsbergen and Greenland to enter and leave the Arctic Ocean. The Arctic does not have any land mass or huge thick ice caps such as those found in Antarctica. The area around the North Pole is made up of individual ice floes which are always in motion and usually freeze together when they meet.

Skate was able to receive radio messages throughout her polar cruise, but could send messages only when surfaced.

She emerged from under the ice cap at 10:45 p.m., 26 March, and headed for home. Upon arriving at New London, the scraped and dented atomic sub received a hero's welcome. Upon orders from the Secretary of the Navy, CDR Calvert received a gold star in lieu of a



SAME TIME—Conventional subs, *USS Trout* (SS 566) and *USS Harder* (SS 568), also cruised under Arctic bringing back valuable information.



second Legion of Merit, and his 106-man crew and ship received a Navy Unit Commendation ribbon. (For many of them who were aboard *Skate* during her first cruise to the North Pole, this meant adding a Bronze Star to the award they had received for that patrol.)

WHILE SKATE was making history at the North Pole, the conventional submarines USS *Trout* (SS 566) and *Harder* (SS 568) returned to New London after doing a little under-the-ice exploring themselves.

Although their accomplishments did not compare with those of *Skate*, they did go 280 miles under the ice cap to establish a new record for conventionally powered submarines.

Both *Trout* and *Harder* are 269-foot, diesel-electric-powered attack submarines built in 1952. They cannot remain completely submerged for extensive periods of time as the newer nuclear submarines do. They must surface or at least expose their snorkel at regular intervals in order to take in air and recharge their batteries.

Trout and *Harder* were able to go the 280 miles under the ice only by finding holes in which they could come up for air. Neither was equipped with any special gear for operating under the ice.

Harder surfaced 23 times during the seven days she spent in the ice area. She remained under the ice up to 14 hours at a time and cruised 75 miles from the edge of the ice pack. According to LCDR Edward W. Cooke, USN, commanding officer of *Harder*, this is a record for conventional subs.

So far as LCDR Cooke could determine, the ice pack was about eight feet thick. "We ran slowly under it, with our periscope elevated to maximum, 60 degrees above horizontal," he said. When we found out that the underside of the ice was not smooth, we had to be careful to avoid striking the bumps projecting downward. "If we bent one propeller we would have been seriously handicapped; if we bent both, we would have been dead," he added.

"Looking through the scope was like watching a curved dome revolving overhead. You got the curious feeling you were about to fall forward on your face," LCDR Cooke explained. "The ice looked like a whitish, cumulus cloud; the open water was a dull gray, with ripples.

LIBERTY ANYONE?—Members of *Skate's* crew take a look at barren Arctic.

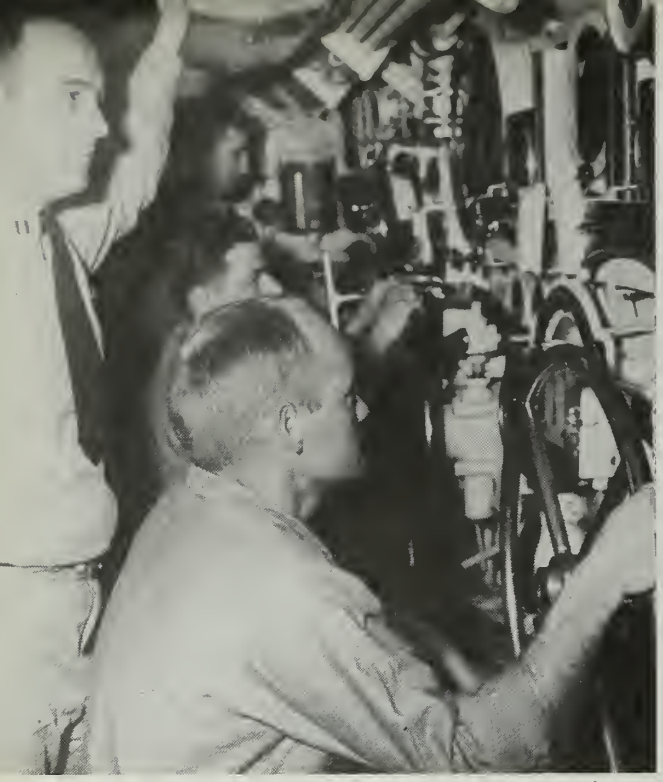
When we observed a *polynya*—that's a sort of open pond in the ice—of 1000 yards or so, we would surface vertically."

The 172 enlisted men and 20 officers assigned to *Harder* and *Trout* found their trip under the ice pack off Newfoundland to be one of the calmest patrols they have ever taken. However, some of the officers and men at first thought that when they went under the ice, they would not find an opening to come up in. But it didn't take long to relieve them of this fear as numerous *polynyas* were found. Inside them the sea was a dead calm but the wind was strong.

"It was an eerie feeling to look around that endless empty field of ice, a *Harder* crew member said. "No land, no ships, no birds—just plenty of nothing, and a dead silence too."

—H. George Baker, JOC, USN.

TOPSIDE—Men found winds at 55 mph and temperature 30 below, above ice.



RESERVE SUBMEN from Wash., D.C., area man the controls of *USS Grenadier* (SS 525) on cruise out of Key West.

OKAY, YOU TAKE

"OPERATION STANDBACK"—an exercise combining the efforts of members of a Naval Reserve Submarine Division and an operating submarine of the Atlantic Fleet—came off without a hitch.

The Reservists, assigned to SubDiv 5-8, Washington, D. C., spent two weeks on Active Duty for Training (AcDuTra) on board USS *Grenadier* (SS 525), home-ported in Key West, Fla.

The highlight of the cruise was "Operation Standback" in which members of the ship's company—from OOD to controllermen—turned over to Reservists every key maneuvering watch station. The Reservists filled the shoes of their Regular Navy counterparts capably—getting the submarine underway, proceeding to the operating area, making the first dive, and returning *Grenadier* back to port upon completion of the scheduled exercises.

"Operation Standback" also served to introduce the unit cruise concept in AcDuTra to the submarine forces. Groups of officers and men from the Reserve division reported as a unit for their AcDuTra.

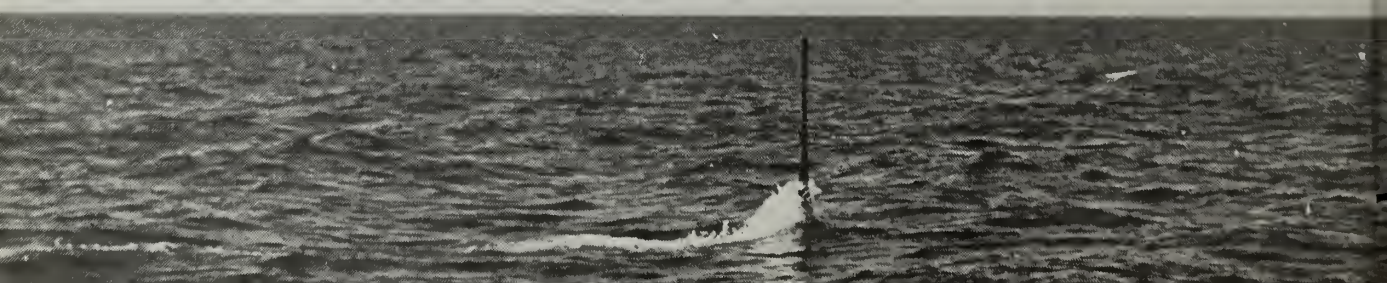
Submarine Reservists normally perform their annual training duty as individuals and not as members of a division or unit. This practice is in line with the mobilization policy for Reserve submarine forces which calls for individual augmentation rather than have a Reserve division completely man a submarine or furnish several full watch sections as integrated units.

Naval Reserve Submarine Divisions are organized into several "attack teams" and a repair unit. The part-time submariners train at Naval Reserve Training Centers and on board pierside training submarines as part of a team. Attack teams make weekend cruises in operating submarines several times a year.

In the spring of 1958, LT F. A. Govan, USNR, one of the attack team commanders of SubDiv 5-8, proposed that his unit take annual training duty as a group in one submarine. Key West was suggested as the location for the pioneering venture. COMSUBLANT and COMSUBRE-FITRAGRU, Key West, approved the plan, and the Fifth Naval District submarine program officer made the arrangements for quotas, orders and transportation.

While these administrative details were attended to, LT Govan and his

'OPERATION STANDBACK' got its name when ship's company stood back to let Reservists from SubDiv 5-8 take over.



NR Approach Officer takes over.

OVER

unit chief, G. L. Gregg, ENDC (SS), USNR, concentrated on training their men specifically for the unit cruise. A few Reservists were recruited from other attack teams in the Division in order to achieve a balance among the rates. The group finally selected for the cruise included torpedomen, enginemen, quartermasters, electricians and seamen. Nineteen of the 21 enlisted men were "qualified in submarines."

The Reservists traveled by air, arriving in Key West at 0717 one Sunday morning. They were greeted at the airport by *Grenadier's* exec and chief of the boat. Each Reservist was given a roster of the ship's company, and a brochure on recreational facilities in the area. Every man was assigned a "running mate" of the same rate from the submarine's regular crew.

Formalities over, transportation was provided to the naval base where a hearty breakfast awaited the Reservists. Paperwork was quickly attended to on board the submarine tender USS *Bushnell* (AS 15) and, at 1500, the Reservists reported on board *Grenadier*—just in time for the submarine's traditional Sunday afternoon "holiday dinner."

At quarters on Monday morning, LCDR T. F. Davis, USN, *Grenadier's* skipper, extended his official "welcome aboard" and explained that a major part of the ensuing two weeks would be devoted to high priority evaluation tests of new equipment.

TWO-WEEK sub cruise gave EM and officer Reservists chance to test training.

The maneuvering watch was stationed, with a Reserve officer as OOD, and *Grenadier* got underway for a day of independent exercises, drills, and general familiarization for the Reservists.

On Tuesday, Reserve torpedomen rigged the forward torpedo room and loaded a Mark 14-3 torpedo. The next day, under the supervision of *Grenadier's* torpedo officer, they completely made ready the torpedo. Defective parts were detected and repaired or replaced. The ready torpedo was loaded into Tube No. 3.

At 1510 Thursday, while cruising submerged, the "bong-bong-bong" of the general alarm sounded throughout the ship.

"Battle stations, torpedo!"

Reserve officers manned the key posts of approach officer, torpedo data computer operator, and navigational plotter. The target was identified as a PC-type ship at a range of 6500 yards, with a small starboard angle on the bow. The submarine immediately swung around to intercept the target, and a periscope approach was begun.

On orders from the conning tower, Reserve torpedomen made ready Tube No. 3 for firing, setting speed and depth as ordered.

On the third observation, the target had zigged to port and now showed an angle on the bow of 20 degrees starboard. The approach officer ordered "right full rudder"

SEASIDE—Reserve officer passes the word on operations. *Rt:* Chief of the Watch and auxiliaryman secure controls.

to a new approach course computed by his TDC operator and then went below periscope depth for a short high-speed run to close the track of the target.

After slowing down, periscope depth was ordered for another observation. The target was coming into critical range. A visual check on bearing and range indicated that only minor adjustments were needed in the target course and speed. These adjustments were quickly made.

"Final bearing and shoot."

"Up periscope."

"Bearing mark."

"Set."

"Shoot!"

"Fire Three!"

There was a characteristic swoosh of air and a slight shudder was felt throughout the submarine.

"Number Three fired electrically."

"Conn, sonar. The fish is running."

Since this was a practice exercise with a friendly PC as target, and since the torpedo was equipped with an exercise head and was set to run deep, there was no contact, no explosion.

Observers on board the PC saw the torpedo wake pass directly under the bridge of the target.

Grenadier surfaced and ran down the torpedo track to assist the retriever in recovering the unit. The spent "fish" was located visually where it had bobbed to the surface.

The approach party had estimated target course at 225°T, speed 12.5 knots. The PC signalled "course 223°, speed 12.5 knots."

Grenadier's exec announced over the PA: "The torpedo ran hot straight and normal and hit the target amidships. Congratulations to the Reservists."

The retriever recovered the torpedo and, later, the Reservists reloaded it and made it ready for a second firing.

The Reservists managed to take time out for relaxation during the training-packed cruise, with Miami as a weekend liberty port.

Early Monday, with an assist from a tug, *Grenadier* spun around in the turning basin and headed out the channel to sea for the return run to Key West, and the submarine's operational commitments were resumed.

On the final Friday of the cruise, two awards were made at quarters. R. D. Brennan, TMT1 (SS), USNR, was chosen as the "outstanding Reservist" for the unit cruise. He was commended by *Grenadier's* CO and presented with an ash tray inscribed with the sub's insigne. Brennan had earned his silver dolphins two years ago, having qualified in this same sub.

The second award went to R. E. White, ENC (SS), USN, *Grenadier's* chief of the boat, for his outstanding leadership during the cruise. He was commended by the Division's skipper and presented with a submarine jacket patch insigne of USS *Drum* (SS 228), the Division's training submarine. It turned out that Chief White had made several World War II patrols in *Drum*.

The Reservists of SubDiv 5-8 are now hard at work preparing for another phase of their training. As this issue goes to press, plans are being firmed up for a joint exercise with surface and air units of the Selected Reserve. This time, the emphasis will be on ASW operations.

By all accounts, these submarine Reservists are top-notch examples of our ready Ready Reserve.

HOW NOW—Torpedo is readied in submarine's forward torpedo room by team of Reservists as they put hours spent at drill to a practical test at sea.

LATEST WORD—LT K. R. Jillson, OIC, studies an inquiry.

Navigator's Friend

EVEN WITH THE NUMEROUS road and highway signs dotting the countryside it's handy to have a good map when one sets out on a trip of any distance. At sea it is the same, only more so, especially with no gas stations to query in checking your course.

Supplying navigational needs for the Navy for the last 128 years has been the Navy's Hydrographic Office in Washington, D. C.

In the Western Pacific Hydro is represented by a branch at Yokosuka. This office, one of three branch Hydros outside the continental U. S., provides Pacific Fleet and civilian shipping in the area with nautical aids and information. It stocks over 1200 charts and some 50 publications of the Pacific area including reproductions in Spanish, German, Dutch and Japanese.

The office also keeps in touch with other hydrographic authorities to obtain information on new hazards or aids to shipping. This data is published and sent to ships in the area and is passed on to the rest of the world through "Notice to Mariners" published weekly by the main office in Washington.

'ROUND HOUSE' of files is used to keep track of 4000 items stocked by Pacific branch of Hydrographic office.

OFF WE GO—H. P. Beaty, QMC, and H. V. Neal, QMC, study chart in Pacific Hydro Office, Yokosuka, Japan.

CHANGE is made on chart as information is received. *Below:* Submariner draws charts from Yokosuka branch.

• It may be that underseas ridges are formed by great convection currents in the earth's interior. These force up sections of the ocean's floor and, at the same time, depress the neighboring crust.

• The earth's crust isn't as thick as it might be. Seismic methods indicate that the thinnest portion beneath the seas is about two and one-half miles thick; the thickest, nine and one-half miles.

• Seismic stations in the Antarctic may tell us, sooner or later, whether the Antarctic is essentially continental or oceanic.

• It's quite possible that Antarctica may be divided in two parts—or almost so.

• Mount Olympus, Washington, appears to be the wettest and snowiest area in the continental United States. A full 120 inches of snow fell in January 1958 — equivalent to slightly more than 30 inches of water. In February, this was topped by 417 inches more, a real record.

Life with IGY—

IT'S BEEN A GREAT

NOW THAT the International Geophysical Year has run its course, what have we learned that is new and startling? Was it a success? Was it worth the time, trouble and expense?

As yet, it's hard to tell. Yet, before the IGY had come to an end, vast quantities of information about the earth on which we dwell—and its environment—had been developed.

It should be understood that the accumulation of IGY data will continue for many months to come and study of this information will occupy scientists for years to come. Nevertheless, some preliminary data has already been made available. Here's a brief summary, as made available by the Office of Naval Research:

• A record low temperature of −124° F. was recorded on 17 Aug 1958 about 400 miles from the South Pole.

• But the South Polar areas are getting warmer, and the North Polar areas twice as much so. The annual mean temperature at Little America has increased about five degrees in 50 years; the increase at Spitsbergen,

IGY BELOW—Navymen explore Antarctic ice Cave. *Rt:* Depths are studied. *Above:* First ultraviolet photo of sun.

WHAT ON EARTH—High flying photo is composite made during weather studies. *Below:* Glacier is observed in an Antarctic reconnaissance flight.

YEAR

in the Arctic, has been twice that much. A few more years and the temperature won't be mean at all, maybe.

• As a result of IGY efforts, the first daily weather maps of the entire globe will be available in a year or two. The United States will be responsible for the Northern Hemisphere, South Africa for the Southern, and the German Weather Service for the equatorial belt.

• The eastward movement of water in the equatorial Pacific is at least three times as much as earlier thought. This calls for a new investigation of the water balance and circulation system of the Pacific.

• Want to make a million or so dollars? Buy up a couple of square miles of Pacific Ocean bottom. Large areas of the goo have been found to be covered with a sludge of manganese, iron, cobalt, copper and other minerals worth perhaps $500,000 per square mile. All you have to do is figure out how to collect it.

• A new undersea ridge has been discovered in the Arctic Basin, thus contributing to a better understanding of the nearly self-contained circulation of Arctic waters.

• The melting of ice along the

IGY SATELLITE program included Navy's development of Vanguard rocket and satellites. Here, Vanguard is readied and instruments are inserted.

Antarctic coast in the summer causes a rapid decrease in the saltiness of the neighboring sea.

• In the area of Little America, the continental ice-cap which covers Antarctica moves seaward about five feet a day.

• The thickest ice-cover ever measured is about 14,000 feet, resting on rock 8200 feet below sea level, about 100 miles east of Byrd Station.

• Ice measurements in Antarctica, where 90 per cent of the world's ice is estimated to be, require upward revision of estimates of the world ice total by at least 40 per cent.

• Little or no change has occurred in the position of glacial fronts in the McMurdo Sound region in the last half century.

• Cosmic ray intensity at high altitudes is over four times more intense in the Arctic and Antarctic than at the Equator.

• The ozone layer and layers of the ionosphere (which extends roughly from 40 to 400 miles up) that are created by solar radiation, appear to persist during the long Antarctic night even though there is no sun.

• The existence of an "equatorial electrojet" appears to have been confirmed, supporting the theory that three globe-circling electric currents circle the earth in the high atmosphere; the other two are in the polar regions.

• Evidence for the existence of magnetic fields in space has been drawn from the fact that cosmic rays do not move directly toward the earth's magnetic field, but instead, show a bias to the west.

• Interior satellite temperatures have been found to be controllable within limits of easy human tolerance.

• The distribution of atmospheric pressure and temperature at high latitudes differs from that at low latitudes. There are strong daily and seasonal variations in density.

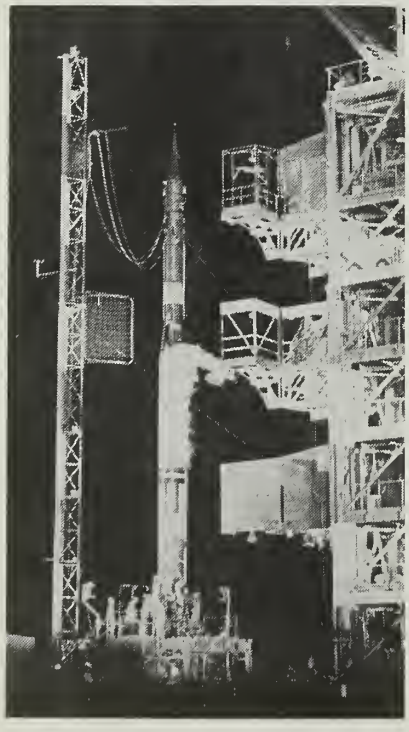
• Observations from satellites suggest that the upper atmosphere is at least 10 times denser than previously thought.

• The earth passed through a remarkably intense solar cloud on 11 Feb 1958, enabling scientists to collect an unusual amount of data on the relationships of upper atmosphere phenomena.

It should be mentioned that, during the International Geophysical Year, which ended 31 December, about 30,000 scientists and technicians in 66 countries made a concerted effort to increase man's knowledge of the earth's interior and surface, the oceans and atmosphere, and the space around the earth.

The work was conducted at about 4000 principal stations and at several thousand additional temporary and volunteer sites and stations. It is estimated that the United States contribution, directed by the National Academy of Sciences and funded in part by Congress through the National Science Foundation, cost about $100 million, exclusive of logistic support. The world-wide program cost about $750 million.

READY TO ORBIT—Navy's Vanguard rocket stands on pad ready to put a U. S. satellite in 200-year orbit.



HIGH LEARNING — Earth's upper atmosphere was studied to gain information for future space travel.

DEPTH Recorder automatically measures ocean's depth with electronic beam.

Surveyors at Sea

ROAD MAPS as we said on page 9 play a big role in today's ever increasing mobile life. Most people would not think of taking the family for a Sunday afternoon's drive over new roads without a map. The same goes for the captain of a Navy ship. He wouldn't take his ship and its "family" to sea without a complete set of charts mapping coral reefs, sand bars, ocean depths and channels to safe anchorages.

Gathering this pertinent data for mariners is the job of the oceanographic survey ships. One such ship of the Pacific Fleet Servicce Force is the USS *Rehoboth* (AGS 50), with a crew of 12 officers and 160 whitehats.

It's an all-hands job to measure the salinity of the sea, take accurate depth readings, gauge the temperature of the ocean water at different depths—from surface to bottom—and take samples of mud, sand and rock content of the ocean's floor.

The ship's log of *Rehoboth* can give men of the sea the answers to any questions relative to the above information. If the ship's records do not list the data on the exact location you are interested in, after a day's time on station the *Rehoboth* men will have the answers.

SALTY JOB—Member of *USS Rehoboth* (AGS 50) prepares to lower Nansen bottle into the sea to measure temperature and salinity at various depths.

MUDDY MEASURE—Mud brought up by corer is checked. *Below:* Ewing corer is set for drop into ocean's floor.

CHIEFS' CHOW—Italian Navy CPOs smile as they are served macaroni during first course of evening meal.

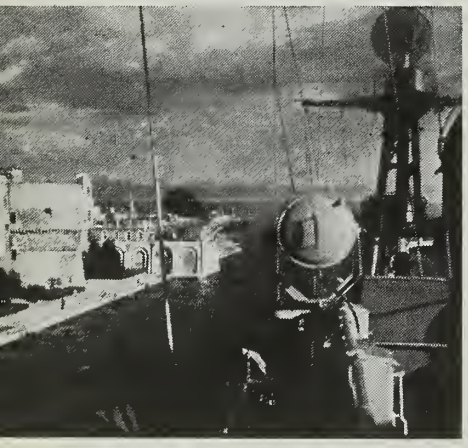
BRIDGE-EYE VIEW—Ship's Captain. *Right:* Swells break over *San Giorgio.*

On Maneuvers with the

THE DESTROYER LEADER *San Giorgio,* flagship of Commander Division Two of Italy's new streamlined fleet, plowed north through the Gulf of Taranto. On the horizon, Italian-built destroyers and frigates formed a tight cordon around a convoy steaming northward from the Ionian Sea.

The force, normally based at Taranto on the instep of the Italian boot, was homeward bound. For the past two days, ships and crews of the command had undergone a series of maneuvers designed to sharpen Italy's post-war navy in one of her prime NATO assignments—convoy escort duty.

The ships in company with *San Giorgio* reflect credit upon Italian shipbuilding. In modern times, Italian warships have been noted for their speed and their maneuverability.



SHIPSHAPE—Fast frigate *Castore,* one of four such types in Italian fleet made her debut last year. *Above:* Ship sails into inner 'Little Sea' at Taranto.

The most recently constructed of this group includes the 2775-ton fleet destroyer *Indomito* and the fast escort destroyers *Castore* and *Centauro.*

Other screening ships in the exercise included the frigates *Albatros, Airone, Fenice* and *Aldebaran* (a former U. S. destroyer escort). The corvettes *Orione* and *Farfalla* were assigned to act as convoy vessels during the exercise.

During the journey, the convoy had been under surveillance of the 865-ton submarine *Giada.* Merchant ships, assumed to be carrying arms and reinforcements, had been *Giada's* main target. She managed to enter the screen twice, and was under attack 15 times during the maneuver.

During the 40 hours of exercise, every conceivable wartime situation had developed. Before sailing, all command officers received sealed instructions. Each envelope contained a list of "damages" their ships supposedly suffered during an attack.

During the night, a U. S. Navy *Neptune* bomber from Malta joined the exercise on an ASW mission. The following day, Italian Air Force jet fighters entered the maneuvers, assigned to give the convoy friendly air support against hostile aircraft.

Gunnery drills, ship-to-ship transfers of "wounded" personnel, and night attacks by motor torpedo boats rounded out the action. When the convoy and its escorts reached port, they experienced underwater attacks by frogmen of the opposing forces.

Convoy escort duty, in addition to antisubmarine and minesweeping

SAN GIORGIO in Gulf of Taranto.

Italian Navy

operations, keeps Italy's ships and men busy the year round.

In its national capacity, the fleet operates under its commander-in-chief. When functioning as a NATO force, a NATO commander such as Commander, Allied Forces, Central Mediterranean, directs its movements.

The latter command shares the wartime responsibility of keeping the Mediterranean sea lanes open for Allied use. Italy's partners in that multi-nation armada include the naval and air arms of Greece, Turkey, the United Kingdom and the United States. Collectively, they form Allied Forces, Mediterranean, whose control point and nerve center is based on Malta.

The Italian Navy participates in five or six major allied exercises annually. Each successive maneuver helps it to know its allies better.

How do navies of many nations, speaking five different languages, coordinate as one? A high stack of heavy, bound publications helps to provide the answer. Between each book's covers are pages of operating procedures, signals, and maneuvering instructions for convoys. Each non-English speaking navy has copies translated into their native tongue.

One of the most effective appraisals of the Italian navy came from the Commander-in-Chief, Allied Forces Southern Europe. Admiral Charles R. Brown, USN, assumed this post at the beginning of the year relieving Admiral P. Briscoe, USN. This is the CINCSOUTH statement:

BACK IN PORT—An able seaman, Italian style, beams through porthole as his destroyer leader enters port. *Below:* Destroyer leader *San Giorgio* patrols.

"Italy, among all the NATO nations in Europe, has been one of the first to enter upon a planned modernization program of their navy.

"It is paid for by their own budget and aimed at maintaining an effective navy of ship types best fitted for a war of the foreseeable future." The statement added:

"Most of their World War II ships, not capable of effective operation in a future war, have been or are being scrapped. The proceeds of this program are being applied to new construction of modern, effective ships in the destroyer, corvette and minesweeping classes."

—Daniel R. Reilly, JOC, USN.

DOWN BELOW—Power plant pointers are given Peruvian enginemen. *Rt:* Signalmen receive instructions on bridge.

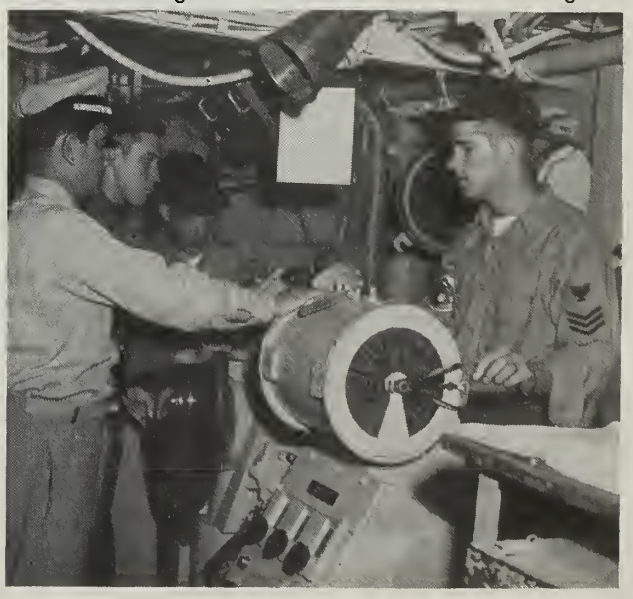
Sailing with the Peruvian Navy

HEADING UP from the land of the Incas and the Andes, two Peruvian ships pulled in to the U.S. West Coast, then headed to sea again for a training cruise under the guidance and instructions of U.S. Navymen. From engineroom to wheelhouse the salty word was passed between our sailors and those of this South American navy. The ships, BAP *Castilla* (D 1) and BAP *Aguirre* (D 2) were familiar to U.S. waters and Navymen, as they are the former USS *Bangust* (DE 739) and USS *Waterman* (DE 740), transferred to the Peruvian navy in 1951 under the Mutual Defense Assistance Program.

As the ships cruised Pacific waters their crews sharpened the skills of their ratings under watchful eyes. Instructions included gunnery, navigation, plotting, operations in the combat information center and communications.

In addition to the exchange of the skills of the sea, the feeling of understanding was strengthened between men of two navies sailing the high seas for the same principles.

GOOD WORD—U. S. Navymen join Peruvian sailors on training cruise on board two Peruvian frigates.



INTERNATIONAL TEAMWORK—*USS Bauer* (DE 1025) and Philippine patrol craft hunt subs in China Sea maneuvers.

Sailing with the Philippine Navy

ALL WAS NOT so quiet in the western Pacific as a U.S. DE and two Philippine patrol craft teamed together to hunt subs and blast "enemy" planes from the sky.

It was a joint United States and Philippine Navy operation to train men of both navies in working together against air and submarine attacks.

Escort vessel USS *Bauer* (DE 1025) and Philippine patrol crafts RPS *Capiz* and RPS *Bohol* were the participants in the operation that began with an ocean rendezvous to start antisubmarine operations against a simulated sneak attack on shipping entering Manila harbor.

On board *Bauer* were a group of Philippine Navy enlisted specialists. For more than a week the men received on-the-job training in engineering and damage control techniques. *Bauer* assigned an officer to each of the Philippine units as observers.

With the aid of two U.S. Navy antisubmarine patrol bombers from the Naval Air Station, Sangley Point, the ships tracked down the supposed submarine, "destroying" it with depth charges during a coordinated attack.

In another phase of training the ships were attacked from the air by two planes out of Subic Bay. *Capiz* provided antiaircraft cover and prevented planes from "sinking" *Bohol* as USS *Bauer* rushed to the rescue.

Tagged "Watersides One," the operation was initiated by Rear Admiral Edgar A. Cruise, Commander Naval Forces, Philippines and Commodore Jose Francisco, Commander of the Philippine Naval Forces, to develop proficiency in joint U.S.—Philippine operations.

After the exercise the unit commanders met aboard *Bauer*. It was mutually agreed that the exercise had been successful. Special praise was given the Philippine ships for excellence in operating their guns.

BIG HIT—U. S. and Philippine Navymen racked up high scores during simulated air attacks while undergoing joint training session on the high seas.

Waves Round Out

As THE WAVES near the end of their second decade of service with the Navy they have been on board to see many changes, including the growth of our Atomic Fleet and latest reaches into space. They have kept up with the changing times, filling many billets never even dreamed of when Congress authorized the Waves (Women Accepted for Volunteer Emergency Service) 17 years ago in July of 1942.

Since the Women's Armed Services Act in 1948 that allowed women in the Navy to take up a career as part of the Regular Navy, their services have become an integral part of our modern Navy.

Here is a pictorial presentation of some of the many jobs in a variety of fields in which Navy women are pulling duty today.

Clockwise from upper left: (1) Wave Aerographer's Mate operates theodolite. (2) Flight orderly awaits passengers. (3) Seaman Wave finds plotting Fleet movements in CNO's office interesting duty. (4) Elec-

Seventeen Years

tronic Technician tests equipment. (5) Wave measures out chemicals in laboratory. (6) Hospital Corpsman pulls duty in Navy hospital's nursery. (7) YN3 mans her typewriter while serving as clerk-typist. (8) Dental Technician assists Navy dentist. (9) Wave Machine Accountant striker sets up for a run. (10) An Aircontrolman takes her turn at tower duty. (11) Navy woman serving as court reporter adjusts Steno Mask. (12) Wave practices on an electronic circuit trainer. (13) A slide is studied by Wave in biology lab. (14) Wave officer participates in public information radio program.

Probably the billets that Waves might be least expected to fill are those at sea, but during the past few years we have seen Waves assigned in hospital ships, and aboard Navy transport ships that carry Navy families overseas.

As you can see from the accompanying photos, they're a good group — and here's wishing the Waves a very happy 17th birthday.

New System Puts Punch

THE NAVAL EXAMINING CENTER at Great Lakes, Ill., has changed its operating procedures and has improved its techniques to speed up the processing of examinations.

This change was a direct result of the additional workload placed on all commands, and the Naval Examining Center, by the recently established proficiency pay and E8 - E9 examinations.

The Examining Center is currently installing more efficient automatic sorting and grading equipment which will help speed up the examination processing cycle and will permit the use of punched cards as examination answer sheets.

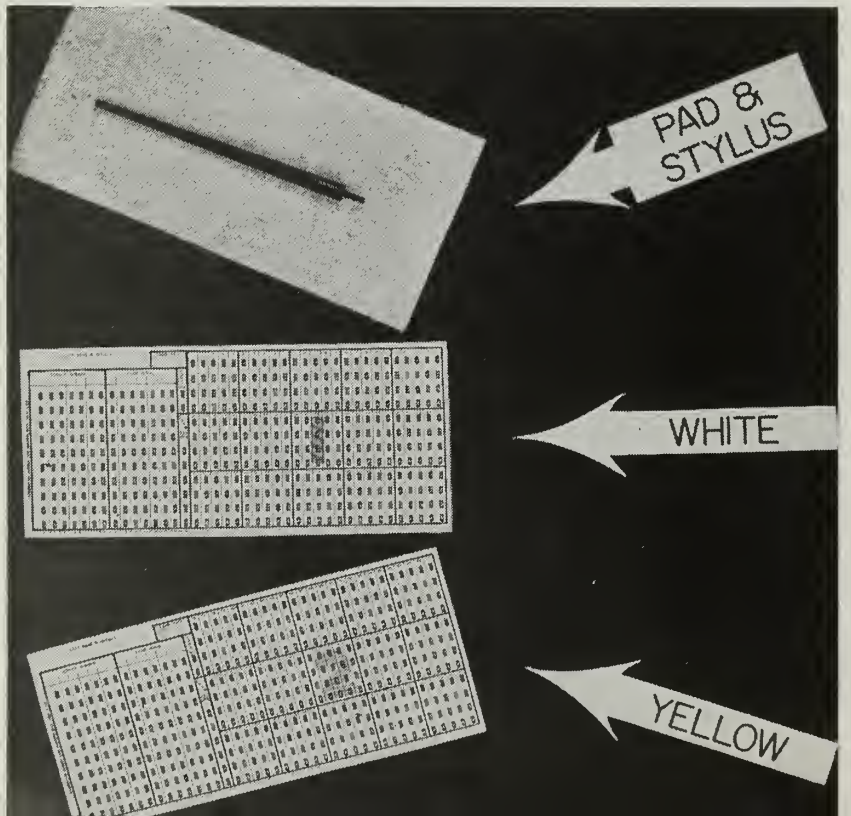
These new punched cards will be used in the upcoming August exams. They replace the current answer sheets on which you were required to mark the answers with a special graphite pencil.

Under the new system, you will receive an examination booklet containing 150 multiple choice questions, and two punched cards as answer sheets. Each punched card (NavPers 624-1 and 624-2) will have space for 75 answers. Detailed instructions on how to use them will accompany each examination.

To learn just how these cards will work, let's watch over the shoulder of J. D. Doe, AB2, as he takes the exam next August.

Doe opens his exam envelope and finds, in addition to the exam booklet, a direction sheet and two special IBM cards, one white and one yellow, which look like the sample printed on this page. The white card has a large "1" printed on it and has numbered columns for the answers to questions 1 through 75; the yellow card has a large "2" and spaces for answers 76 through 150.

EXAM TOOLS—Punch cards and stylus will replace current answer sheets marked with special pencil, in new system designed to speed up results.



Doe picks up the white card and prints his last name and initials in the block at the upper left corner of the card. He prints "AB1" in the box marked "Exam Rate," the rate he's going up for. Under "Service Number" he fills in his service number, one digit in each block, and then circles the corresponding numbers in the columns below each digit.

Doe checks his exam booklet for the serial number, which he copies in the blocks below "Exam Serial" and then circles the proper numbers below each digit. Since Doe is filling in card number "1" he circles "1" under "Card No." AB1 is pay grade E-6, so he circles the "6" under "Exam Pay Gr."

Now card number "1" is ready, so Doe takes the yellow card and prepares it the same way, except that he circles the "2" in the "Card No." column.

Doe is now ready to take the

exam. When he gets the word, Doe places card "1" on a hard smooth surface and begins the test. He decides that choice number "1" is the correct response to question number "1" so he circles the "1" under the "1" column.

So it goes for the rest of the exam, Doe shifting over to card number "2" for questions 76 through 150.

He finds, when he has gone through all the questions, that he still has time left, so he goes back and rereads the exam. He changes his mind about the answer to question "2"; it should be choice "4" instead of "2." Instead of erasing, he draws an X through the "2" he circled earlier and circles the "4."

When Doe is satisfied with his answers, the proctor gives him a sponge pad and a blunt-tipped plastic stylus. Placing the card on the pad, Doe uses the stylus to punch out all the numbers he has circled.

HERE'S HOW new answer system will work. First, circle number of desired answer. Mark X through changes. *Below:* Push out final answer with stylus.

in Exams

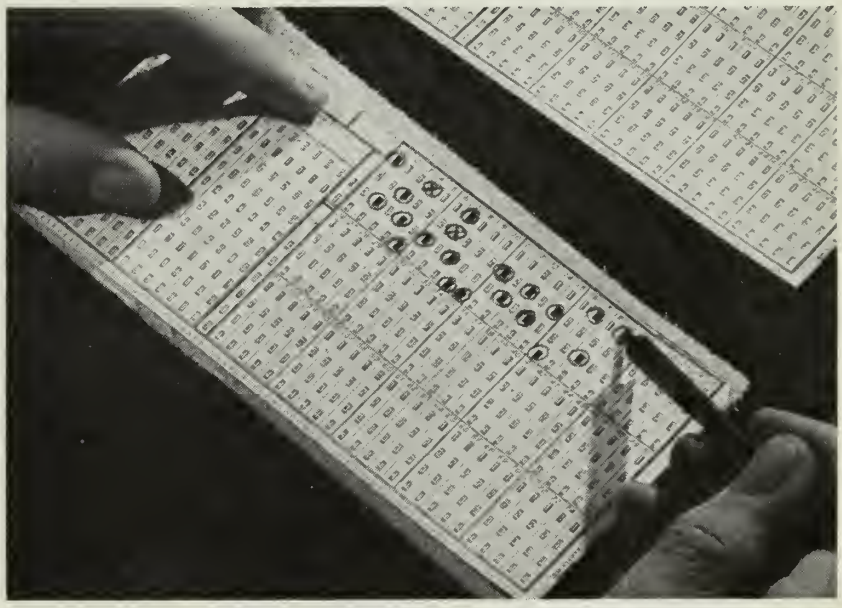
This card will be the only thing the machines at the Exam Center will have to work with in determining his grade.

IN ADDITION TO using the new punched cards for answering the exams, other changes in administrative procedures should help speed up the results.

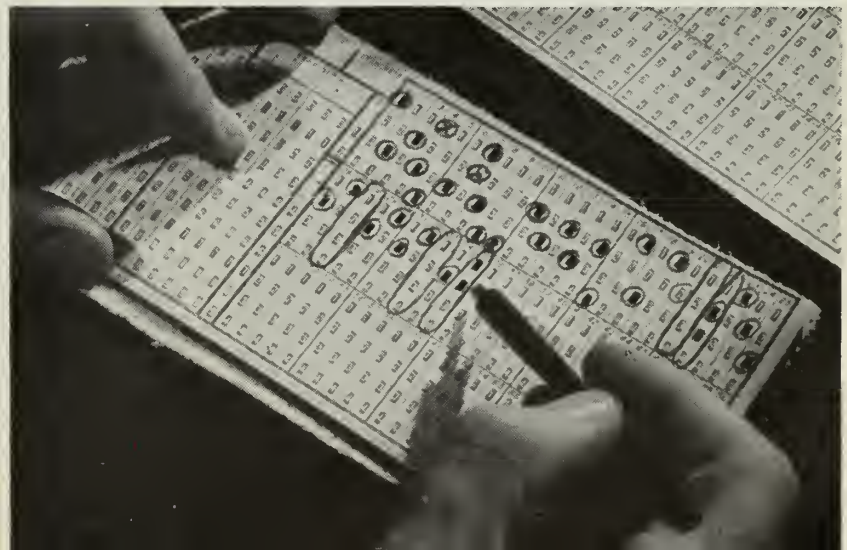
Your command submits a duplicate copy of NavPers 624 (Report of Examination for Advancement or Change in Rating) to the Examining Center at least 30 days before the date of the exams. (Copies of NavPers 624 for personnel scheduled to take the August 1959 examinations are due at the Examining Center, Great Lakes, on or before 1 Jul 1959).

Previously, your NavPers 624 was prepared by your command and forwarded to the Examining Center with your examination answer sheet.

In addition, many commands fail to submit the answer sheets promptly to the Examining Center. In the November 1958 proficiency exams, for example, 18 commands did not mail the completed examinations to the Examining Center until after 15 December—about 40 days after the exams were conducted. As a result, some of these completed exams were not received at the Examining Center until January 1959.



SOMEONE GOOFED—Sample card below shows two types of errors in marking. Circled mistakes show failure to punch and punching more than once.



SERVICESCOPE

Brief news items about other branches of the armed services.

THE WORLD'S LARGEST plastic balloon—measuring five and one quarter million cubic feet — has been launched by the Air Force. This large-balloon flight was the first in a series of launches scheduled as part of a long-range study of the stratosphere being conducted by scientists of the Air Force Cambridge Research Center's Geophysics Research Directorate.

The stratospheric balloon program is designed to provide geophysical information for a more comprehensive understanding and analysis of the earth's atmosphere. Data received from these flights are directly applicable to the Air Force atmospheric and space programs.

The balloon, launched from Vernalis, Calif., was instrumented by Tufts University of Medford, Mass. It carried a payload of instruments for measuring pressure, temperature and wind velocity. At the end of the flight, the instrumentation package is separated from the balloon and descends to earth by an orange and white parachute.

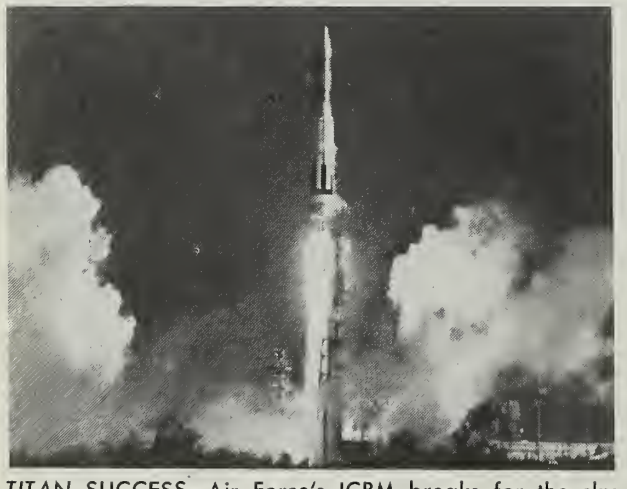
The polyethylene plastic which the balloon is made of is only one-thousandth of an inch thick. When filled with helium the balloon measured 240 feet in diameter. When the balloon's payload is dropped, the huge plastic bag then ascends to an extreme altitude where expansion of the helium and the cold upper air combine to shatter the balloon into almost microscopic fragments.

★ ★ ★

THE ARMY ORDNANCE Guided Missile School in Huntsville, Ala., has televised a live two-hour course on guided missiles direct to the Pentagon. The course dealt with maintenance methods used to keep five of the Army's operational guided missiles in constant combat readiness. These include *Hawk, Nike-Hercules, Lacrosse, Corporal* and *Redstone.*

The telecast was the first program on missiles ever transmitted by the Army to the Pentagon. Viewing the activities which were taking place 730 miles away from the Pentagon were the Secretary of the Army, Wilber M. Brucker, and about 300 high ranking officers.

The guided missile course was also transmitted simultaneously for viewing by senior officers at the Armor School, Fort Knox, Ky.



TITAN SUCCESS—Air Force's ICBM breaks for the sky on first try during February test at Cape Canaveral.

COOL SHOP — Army scientists and technicians in the Arctic region perform tests in underground snow house.

THE FIREBEE has established a new world altitude and duration at altitude records for a jet target drone. The record-breaking flight was made from Halloman Air Force Base, N. M.

Achieving a maximum radar-measured altitude of 59,000 feet, the XQ-2C drone made four simulated target runs during 77.5 minutes of remote-controlled flight above 50,000 feet in the dual-record accomplishment.

Total flight time was 96.8 minutes, including 87.5 minutes under power, and 9.3 minutes in a glide before its parachute recovery.

The most advanced member of the *Firebee* drone family, the XQ-2C is a faster, higher altitude version of the Navy KDA-4 and Air Force Q-2A models now in quantity production.

★ ★ ★

AN ICICLE TREASURE TROVE of frozen historical facts —dating back more than 800 years—is being studied by scientists in the Army's Snow, Ice and Permafrost Research Establishment (SIPRE) at Wilmette, Ill.

The "icicle," a core of Arctic ice four inches in diameter and more than 1300 feet long, contains trapped samples of air preserved from the days when Washington breathed at Valley Forge, Columbus sniffed at sea and King John gulped at the signing of the Magna Charta.

From sample sections of the core, which was drilled from the Greenland icecap some 200 miles east of Thule, the scientists should be able to answer all sorts of questions—for instance:

How much air contamination has been caused by the industrial revolution?

How much atomic fallout has there been each year since Hiroshima and Nagasaki?

How much snow has fallen in Greenland since 1100 A. D., the year the oldest part was believed formed?

Even 800-year-old bacteria are believed to be perfectly preserved in the ice and available for study.

Dr. Henri Bader, chief scientist at SIPRE, calls the icecaps of Greenland and the Antarctic a "treasure trove for the scientist."

"Every snowfall and everything that fell with it are,

so to say, separately and safely filed for future reference by being buried under later snowfalls," he says, "Natural objects which fell with the snow, such as volcanic ash, meteorites, spores and bacteria are perfectly preserved year-by-year for anyone who is interested in them. Scientists who have been monitoring radioactive fallout can go back to the icecaps to measure some things they missed at the beginning."

Although scientists have long known about the icecap "treasure trove," they couldn't exploit it fully until the development of deep-drilling techniques by SIPRE in 1956 and 1957. Chester C. Langway, Jr., who is in charge of the Greenland deep drill core investigation, says samples of air from the past have been trapped in the ice and preserved as bubbles. When the bubbles are analyzed, the content and composition of the air for any given available year can be determined. The years can be identified, in most cases, by easily distinguishable "rings."

Already, ash from the Katmai volcanic eruption of 1912 has been identified in ice about 70 feet below the surface. About 160 feet down Langway expects to find ash from the 1883 eruption of Krakatoa, a volcano in Indonesia which blew up so violently that it caused sea waves as far away as Cape Horn and possibly England.

The 1300-foot ice core drilled in Greenland was sawed in half lengthwise at the site. Half of it is being stored in Greenland, and about 200 feet of selected sections, cut in six-foot lengths, have been packed in dry ice and shipped to Wilmette. Tests were made in Greenland and at the SIPRE laboratory in Wilmette to detect any structural changes in the ice caused by handling and shipping.

IGY scientists are working on a similar drilling operation in the Antarctic. Comparison of their data and that gathered by the SIPRE scientists may reveal a great deal about the movements of air masses.

★ ★ ★

THE U.S. ARMY'S *Nike-Hercules,* supersonic surface-to-air guided missile, has successfully intercepted and destroyed a target at an altitude of more than 20 miles.

The target was provided by *Pogo-Hi,* a Navy-developed parachute-type target which is boosted to the desired altitude by a small 13½-foot rocket, and then spring ejected. The parachute, coated with a thin layer of metallic silver, reflects radar signals and resembles an aircraft on the radar scope.

ON ICE—A reminder of cooler days is this shot of USCG icebreaker *Eastwind* last winter in Gulf of St. Lawrence.

HOUND DOG—USAF's new air-to-ground missile rests in place under wing of B-52 for transportation to target.

More than 200 *Nike-Hercules* missiles have been fired under a variety of extreme target and intercept conditions. With a maximum range of more than 75 miles, *Hercules* has now made interceptions at altitudes below 5000 feet to over 100,000 feet. Although 20 miles is less than one-third of the extreme range of *Hercules,* it is the maximum altitude for targets.

Hercules has demonstrated its effectiveness against targets flying at speeds above Mach 2.5 and against targets which have maneuvered violently before interception. Recently at Eglin Air Force Base, Fla., six missiles were fired and all were successful [all target drones engaged were destroyed].

Hercules is now emplaced in defense of critical target areas in the United States. It will supplement and eventually replace existing *Nike-Ajax* weapons which have been guarding key cities and defense installations.

★ ★ ★

THE AIR FORCE HAS MODIFIED one of its C-130A transport planes so it can launch jet drone targets. The huge transport with jet drone targets nestled under its wings has already made a successful test flight from Dobbins Air Force Base near Atlanta, Ga.

These tests are to determine the C-130A (*Hercules*) transport's ability to launch realistic targets for support of research, development, operational evaluation and aircrew training of the Air Force's air defense weapon systems.

The drone launcher-director, called GC-130A, is one of two C-130 propjets being modified for the AF's Air Research and Development Command.

When modifications are completed, the two planes will be able to release jet-propelled drone targets high in the sky to test the capabilities of the nation's air defense system under actual operational conditions.

The GC-130A can carry and launch twice as many drone targets as present drone-carrying aircraft. The modified *Hercules* will be able to release the drones as free flying targets at altitudes up to 30,000 feet. Present drone launchers work with a 15,000-foot ceiling.

LETTERS TO THE EDITOR

This section is open to unofficial communications from within the naval service on matters of general interest. However, it is not intended to conflict in any way with Navy Regulations regarding the forwarding of official mail through channels, nor is it to substitute for the policy of obtaining information from local commands in all possible instances. Do not send postage or return envelopes. Sign full name and address. Address letter to Editor, ALL HANDS, Room 1809, Bureau of Naval Personnel, Navy Dept., Washington 25, D. C.

Requesting Extension of Sea Duty

SIR: Can I refuse shore duty when I fill out my Seavey rotation data card?

If I am able to remain on sea duty, will I receive another Seavey card a year from now?—E. E. T., HM2, USN.

• *According to BuPers Inst. 1306.62A it is possible for you to request an extension of your sea tour if rotation to shore duty would create an undue personal hardship. However, under normal conditions, you cannot refuse shore duty unless you have less than a year of obligated service remaining on your enlistment or extended enlistment.*

As for your second question—if your tour is extended, you should still receive a Seavey card the following year, since your sea duty commencement date would remain unchanged.—ED.

Retainer Pay

SIR: In past editions of ALL HANDS you have published articles about retainer pay. I agree that the basic pay for a chief going out on 19½ years is based on 20 years' longevity. Every instruction I can obtain substantiates this.

But, it appears after talking with chiefs, that they are receiving retainer pay based on 18 years' service (day-for-day without constructive time).

The general opinion seems to be that there was a NAVCOMPT ruling made some time last year that said a man going out on 19½ years would receive retainer pay based on 18 years' longevity unless he actually completed 20 years' service, day-for-day.

If the above facts are right your articles concerning retainer pay are wrong. What is the straight story?—G. N., PN1, USN.

• *We don't know who's been talking to you, but you have either been getting some bad info, or you have misinterpreted what you've been told.*

If a man goes into the Fleet Reserve with 19½ years' day-for-day service (six months or more counts as a full year for pay purposes), his retainer pay is based on the pay for over 20 years' service.

Only if a man has 19½ years' service, which includes constructive time, would his retainer pay be based on 18 years' service.

Here is what the Comptroller said about this on 5 Aug 1958 in Comptroller General decision B-135771:

For the purpose of transfer to the Fleet Reserve and for use as a percentage multiple in the computation of retainer or retired pay, a minority enlistment should be counted as a full four years' service and enlistments served within three months of expiration should be counted as a full term enlistment. (That's where you can pick up constructive time.) However, such constructive service cannot be used in the computation of basic pay.

It is possible, therefore, that a man will have as much as 19 years' and 6 months' service for transfer to the Fleet Reserve (including constructive time) but will not have that much (actual day-for-day time) for basic pay purposes. His retainer pay will be computed at 2½ per cent times 20 years' active service times basic pay for over 18 years (2½% X 20 X 18).

If a member does not have any constructive time (as in the cases you mention) included in his 19 years' and 6 months' service, his retainer pay would be computed at 2½ per cent times 20 years' active service times basic pay for over 20 years (2½% X 20 X 20).—ED.

Army Medals

SIR: Before enlisting in the Navy I was in the Army. I earned the Army of Occupation and Army Good Conduct Medals.

Can they be worn on my Navy uniform?—A. L. R., ACAN, USN.

• *But definitely — as we sometimes say when we're trying to sound high-class.*

Both the Army of Occupation and Good Conduct Medals may be worn on the Navy uniform. "Uniform Regulations," which lists the order for wearing all Navy awards, plus quite a few of those of other branches of the armed forces, will show you how they should be worn.

If, besides earning the Army of Occupation Medal, you have also earned the Navy Occupation Service Medal, you are not entitled to wear both. However, you may decide for yourself which one you want to accept and wear. In the Navy, the Army of Occupation Medal takes precedence after the Navy Occupation Service Medal, and the Army Good Conduct Medal takes precedence after the Navy one.—ED.

Eagle-Eyed Ham

SIR: Being an ardent and active "ham" (W7UWP), I read with interest the article about the ham radio set aboard USS *Glacier* (AGB 4), back in your February issue.

I doubt, however, that *Glacier's* station ". . . operates on the 15- and 20-millimeter bands . . . ," since this is considerably higher than the amateur bands extend. I'm sure the writer meant to say "meter," instead of "millimeter."—O. W. B., LTJG, USN.

• *You're absolutely right—the writer did mean to say "meter."*

Unfortunately, just as he was typing up that part of the story, someone walked by singing, "Down By the Old Milli Stream," and the poor fellow got a bit confused.

As everyone knows, the 15- and 20-millimeter bands are super-high frequencies, such as might be used in radar. Ham stations operate on much lower frequencies.—ED.

Aviation Guided Missileman

SIR: I understand strong recommendations have been made to disestablish the GF rating. If this does come to pass and I am reverted to my old rating of ATC, what will happen to the pro pay that I am now receiving? I have been told that if I change my rate to ATC now, I might lose my pro pay. Would the same thing happen if I wait?—G. W. B., GFC, USN.

• *First of all, you're right about the fact that disestablishment of the Aviation Guided Missileman rating is being considered. Many recommendations from Fleet commanders have been received and are being considered, but no decision has been reached. It doesn't seem likely, however, that the rating will be disestablished this year.*

So far as the pro pay is concerned, you would probably keep it since ATC, like GFC, is a critical rating. The same thing would be true if you decide to change your rating now. Each individual case, however, is reviewed by the Bureau; no blanket decision is made.

If you have any other questions about pro pay, we suggest you find a January 1959 issue of ALL HANDS. *A full explanation of the pro pay system is on page 47.*—ED.

Big, Happy Family

SIR: In your April 1959 edition, H. I. Hanna, CHSCLK, W-4, USN, spoke up for personnel men just a little too loud for my temper.

When, in your forthcoming issue you

tell how much you know about personnel men, don't forget to point out that when a command doesn't rate a PN, or where it is impossible for a PN to get into some of the more arduous positions afloat (such as the one I have), it is up to the YN to carry out his own duties and fulfill the responsibilities of PNs.

As yeoman for this submarine I do all the jobs that Mr. Hanna pointed out as "major and indispensable items which would be hard to come by if the personnel man failed to carry them out" plus all the jobs that a personnel man couldn't carry out—especially one that doesn't know what a CO Order Book is (even if they don't ask for it on a service-wide examination).

As justification for the above statements concerning the varied tasks for which I and all other yeomen in submarines are responsible, I respectfully submit the following rundown for CHSCLK Hanna:

• First, as part of the submarine crew, all yeomen (as well as every one else aboard) must know as much about the submarine as the most senior engineer. This covers everything from normal steaming (surfaced or submerged), to the ability to start, stop and operate all machinery including main engines. He must be able to handle any emergencies. It takes months of hard work after normal working hours (if there is any such thing as normal working hours on a submarine) to earn the right to wear dolphins.

• The yeoman tallies the ration count and furnishes the Supply Officer with the necessary information. We eat, and eat well, and we don't have a personnel man within miles.

• The yeoman keeps BuPers going (as Mr. Hanna contends the personnel men do) by preparing diaries, keeping personnel records up-to-date, handling reenlistments and all related paper work. By the way, check the reenlistment percentages for the rest of the Fleet against submarines.

The submarine service is the Navy in this age of atomic power. So far as I know, there is only one PN1 in the submarine service today, and he has been in subs less than a year. So where is the big need for personnel men?

That takes care of the personnel men jobs that Mr. Hanna thought only PNs could do. Now you want me to start on all the jobs I do as a yeoman? Better yet, lest I get writer's cramp, I suggest you check the manual for qualifications for advancement to YNC and then check the manual for qualifications for warrant officer (ship's clerk 782) and I'll bet any senior submarine yeoman (second class or above) can do any of the jobs involved, alone.

As for the PN being "a technician in personnel management," just show me one that is—unless Mr. Hanna is talking about the one in submarines. Most offices are supervised by either yeomen or warrant officers who were yeomen.

If personnel men are so indispensable, why don't submarines (where a job well done is the rule rather than the exception) have an allowance for a personnel man instead of a yeoman? —J.E.B., YN2(SS), USN.

• *Submarine yeomen do have a good reputation, but we hesitate to take sides. We're just passing on your own opinions. Here is a PN that has a couple of things to say in their behalf.*—ED.

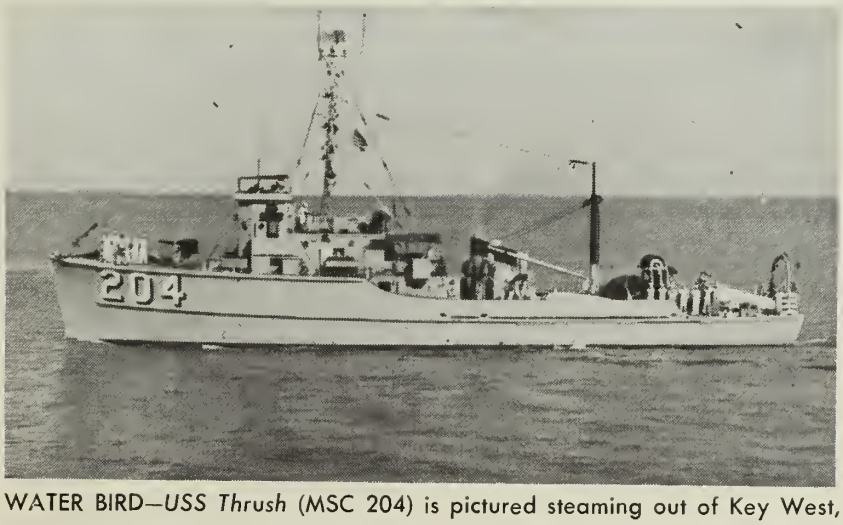
SIR: I want to know what the yeoman (who asked "What does a personnel man do, anyway," November 1958) has been doing himself since he joined the Navy. Since he had the nerve to ask such a question, I'm sure that somewhere along the line he has read NavPers 18068 (Qualifications for Advancement in Rating).

We personnel men are a cross between journalist, disbursing clerk, and yeoman. Between answering questions concerning pay, time in service, liberty, leave, insurance, and a million other items, we have the job of preparing and maintaining service records. If you think this isn't a big job, I suggest you take a tour of any receiving barracks or personnel office.

After what H. I. H., CHSCLK, W4, and H. J. J., PN1, had to say about personnel men, I don't think it's necessary for me to add anything more.—R. L. S., PN3, USN.

• *Don't get us wrong, please. We're not saying a word one way or another (we wouldn't dare, at this point). We're just forwarding, without comment, opinions from the Fleet.*—ED.

TIED UP—Navymen of *USS Cadmus* (AR 14) play captive volleyball. It's like the regular game except a line is attached from ball to wire over net.



WATER BIRD—*USS Thrush* (MSC 204) is pictured steaming out of Key West, Fla., where this coastal mine sweeper (nonmagnetic) makes her home port.

Duties of the Command Duty Officer

SIR: Since the war the new "Duty Commander" watch has been under considerable discussion. I would appreciate some clarification of his duties and responsibilities, and would like to know whether or not this watch is authorized for in-port use only, underway only, or at all times.

If it is authorized for underway operations, does the "Duty Commander" take precedence over the OOD in an emergency situation?—A. C. R.

• *The term "Duty Commander" is not defined or even mentioned in "U. S. Navy Regulations" (1948) or other departmental regulations. Therefore, it has no official significance in the Navy. Informal inquiry indicates, however, that this term probably had its origin in naval custom and usage, concerning which Articles 1285 and 1009 of "Navy Regs" appear to have a bearing.*

Article 1285 provides that:

"1. Unless otherwise authorized by the Chief of Naval Operations, at least one officer, either in command or eligible to succeed to command, shall always be present and ready for duty within each naval command to which two or more such officers are attached.

"2. Aboard ships having, in addition to the commanding officer and the executive officer, two or more officers detailed as heads of departments and eligible to succeed to command, one head of department, or such other officer, eligible and qualified to succeed to command, as the commanding officer may designate, shall always be present and ready for duty, unless relieved by the commanding officer or the executive officer. The executive officer normally shall not be required to alternate with any other officer in leaving the ship unless the number of officers available for duty, as described herein, is reduced to two.

"3. In the absence of the commanding officer or the executive officer, or both, the duties of these officers shall devolve upon the officer next in rank and eligible to succeed to command, who is attached to and present in the ship or station."

Article 1009 provides in the pertinent part that:

"1. The executive officer may direct the officer of the deck in matters concerning the general duties and safety of the ship. When the commanding officer is not on deck the executive officer may direct the officer of the deck how to proceed in time of danger or during an emergency, or he may assume charge of the deck himself, and shall do so should it in his judgment be necessary.

"2. When the commanding officer considers that circumstances warrant, he may delegate to another officer, for a specified watch, authority similar to that prescribed in the preceding paragraph for the executive officer in relation to the officer of the deck. Such officer shall, while on watch, bear the same relation to the officer of the deck, both in authority and responsibility, as that prescribed for the executive officer, but shall be subordinate to the executive officer."

"Shipboard Procedures" (NWP 50) provides for the designation of a "Command Duty Officer" to serve during both in-port and underway routine steaming.

The duties of the Command Duty Officer are defined in Articles 621 and 631 of "Shipboard Procedures" to include the powers of the executive officer with relation to the OOD. These articles provide that the commanding officer may, if he thinks the circumstances warrant such action, delegate to another officer authority similar to that prescribed by Article 1009 of "Navy Regulations," quoted above. This officer (The Command Duty Officer) "shall, while on watch, bear the same relation to the officer of the deck, both in authority and responsibility, as that prescribed for the executive officer" in Navy Regs.

The Command Duty Officer, however, remains subordinate to the executive officer. Such officer is referred to in Article 631 of NWP 50 as "deputy to the executive officer" and has, on some occasions, been called "acting executive officer."

As you can see from all this, there is a legal basis for the designation of a Command Duty Officer underway as well as in port, and that an officer so assigned by the commanding officer may take precedence over the officer of the deck in an emergency.

The term "duty commander," however, has no official significance within the Department of the Navy.—ED.

Overseas Retirement

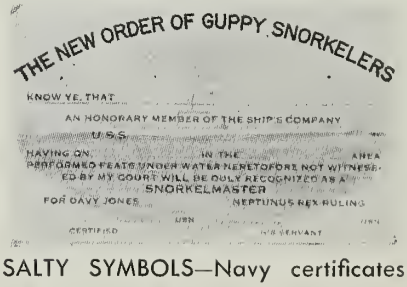
SIR: I have some questions concerning release to the Fleet Reserve while stationed overseas, and travel from place of release to the home of selection. Here is what I want to do:

I want to be released to the Fleet Reserve from my present station in Morocco. Then I want to travel in Europe for a few months. After this, I want to go through the proper procedure to obtain permission to reside in either Australia or Mexico.

How do I go about obtaining transportation from Europe to my home of selection — wherever it may be? — E. E. G., ADC, USN.

• *Article C-10201(4)(a) of the "BuPers Manual" describes the procedure to be followed when requesting separation in a foreign country for the purpose of residence or travel. It states that you must apply for the necessary passports in accordance with Art. B-2110, "BuPers Manual," and for permission to remain or travel in a foreign country or its possessions. You are reminded that each application in this connection is given due consideration on an individual basis.*

Before you are separated or released to inactive duty, your commanding officer must make sure that you will be issued a passport or have been or will be granted permission to remain in the foreign area concerned. In this connection, he may accept a written statement from the appropriate consular or diplomatic representative to the effect that you have applied for a passport and that it appears that you are eligible to receive a passport upon your separation or release from active naval service.



SALTY SYMBOLS—Navy certificates are many. We'd like to see yours.

As for permission to travel or reside in foreign countries, you will need a written statement from the foreign governments concerned. This statement should say that you have been granted, or it is anticipated that you will be granted, permission to remain or travel in the foreign country concerned.

When you complete your European travels, it is suggested that you contact the nearest U.S. naval activity for travel arrangements to your selected home. It will probably be necessary to process your application for transportation through this Bureau. But it will depend on your location at that time and the location of your home.

To go a step further, Chapter 8 of "Joint Travel Regulations" contains information in regard to shipment of household effects. Also, check with your local shipping officer concerning shipment of your household goods to your home of selection. This may present a problem. It should be thoroughly checked out before any final decision is made.

Article C-13303, "BuPers Manual," states that Fleet Reservists who wish to

reside outside the United States or its possessions for more than six months should forward their requests to the Chief of Naval Personnel via their commanding officer.

Permission to reside outside the continental limits of the United States is granted for periods of one year only. But this period may be renewed, upon request, at the discretion of the Chief of Naval Personnel. You may get this permission before you transfer to the Fleet Reserve. Good Luck!—ED.

Reversion to WO Status

SIR: If an LDO were reverted to warrant officer status, would the time he served as a warrant officer before he accepted an LDO commission count toward computation of warrant grade eligibility?—C.A.H., Jr., LTJG, USN.

• *Following two consecutive failures of selection to higher grade, an LDO who held a permanent grade below W-1 when first appointed an LDO has an option. Instead of being retired or discharged, he may revert to the grade and status he would have held if he had been appointed a W-1 instead of an officer designated for limited duty.*

Having been appointed to LDO from W-1 (temporary) grade, he would be reappointed a warrant officer if he so elected. This would be with the rank and date of rank to which he would be entitled had he remained a warrant officer.

Secretarial regulations for administration of the Warrant Officer Act of 1954 provide that a former warrant officer shall be credited, upon reappointment, with the active service actually performed in the grade under a previous appointment.

The above principles pertaining to reversion from an LDO status are applicable only to those who have twice failed of selection to higher grades.—ED.

Dress White Trials

SIR: On the cover of the December 1958 issue of ALL HANDS, sailors are wearing what appear to be dress whites.

What's going on, are dress whites coming back?—R.B., ex-USN.

• *They may come back, and then again, they may not. The picture you saw does have men wearing dress whites. That uniform, with a dark blue washable cotton twill collar and cuffs with white striping, is being tested in the Fleet as a possible replacement for the present plain white undress jumper.*

Before World War II, a dress white jumper with a blue wool collar was worn, but problems of manufacture, comfort, laundering, shrinkage, lint and fading caused it to be discontinued. The new dress jumper, if and when approved, should overcome those faults.—ED.

Knot Board

SIR: As regular readers of ALL HANDS we have noticed many pictures and stories of knot boards and fancy work throughout the Fleet.

We aboard the cable layer, USS *Thor* (ARC 4), don't like to be outdone, and feel we can compete with the best. We are sending a picture of the knot board which now hangs in our crew's recreation room. Maybe you can use it to show your readers our knot board does differ a little from the others.

We have a complete round bar davit with a model of a whale boat griped in. Also, on the port side of the board we have a boat boom rigged in with tackles, ladder, etc. The centerpiece contains pictures of our ship, our skipper and exec, topped with a mast complete with halyards.

Around the edge is a border of pennants and flags, and topping the board is a wooden, hand-carved image of Thor, pagan god of thunder, for whom our ship was named.—W. J. H., BM3, USN, and J. P. G., BM3, USN.

• *We didn't think anyone would outspectacular Chief Mickalson's knotboard,* (ALL HANDS, *January 1958*) *but after a look at this photo, we agree* Thor's *crew is not to be easily outdone. Can you top this?*—ED.

Many Good Examples

SIR: When I compared the records of USS *Mercury* (AKS 20), published in the January issue of ALL HANDS, and the records of our ship—USS *Castor* (AKS 1), I noted that although both ships were built in 1939, *Castor* was commissioned 15 months earlier than *Mercury*. Besides that, *Castor* was designated an AKS from the very beginning.

I feel certain that the editors of ALL HANDS will honor the well known custom of granting "equal time" or in this case "equal space" to the history of USS *Castor*.—M. H. D., Capt, USN.

• *When we run a long history of a ship, such as we did for* Mercury, *we assume it will be of interest to every other ship of its type and that it will also stand as sort of an example of the fine work being done by men in those ships.*

In other words, although the name of the ship was not Castor, *we published it as an example of the hard work that has been done, and is still being done, by all AKSs, including yours.*

We did look over the history of Castor, *and as did* Mercury, *you too have won five battle stars. You made trip after trip during the war in an effort to keep our men overseas supplied with clothing, medical and dental supplies, and ammunition.*

Unlike Mercury, *you were at Pearl Harbor when the Japanese attacked on 7 Dec 1941. You were strafed. After the assault, unloading operations were resumed; fortunately there were no casualties aboard.*

That was only the beginning of many missions that were successfully carried out by your ship. So far as we can tell from the history of Castor, *she has visited nearly every island in the Pacific. Here's a list of a few of them; Wake Island, Johnston Island, Ellice Island, American Samoa, Fiji Islands, Tarawa, New Guinea, Admiralty Islands, Eniwetok Atoll, Okinawa, Saipan, Guam, and the Marianas.*

Castor *can well be proud of her record. Incidentally, two* ALL HANDS *staffers have sailed in* Castor, *and have a fond memory of that fine ship.*—ED.

PLENTY OF ROPE—W. J. Hamilton, BM3, USN, poses with knot board on deck of cable ship, *USS Thor* (ARC 4).

When Does Overseas Tour Start?

SIR: I left the United States for duty on Guam in September 1957. Although the normal tour there was two years, I was transferred to Hawaii after only one year.

The tour here in Hawaii is three years. Officially, when did my three-year tour begin: On the day I left the United States; on the day I arrived on Guam; or on the day I arrived in Hawaii?—T. G. B., DM2, USN.

• *Your three-year tour began on the day you reported to Guam. The question is answered by two instructions. BuPers Inst. 1300.15C provides that personnel who are transferred from one overseas area to another will be credited with the time served in the first area (in your case, the year on Guam).*

BuPers Inst. 1306.62A states that tours commence on the day you report to the overseas activity.—ED.

They're a Good Group—And NSGA Writer Shows Why

SIR: For over a year now I have been hearing about the efforts to further the President's People-to-People Program. Almost every time I pick up a copy of ALL HANDS I read a story on the subject.

The U. S. Naval Security Group Activity in Bremerhaven, Germany, has done as much along this line as any command I have read about. We started off by asking local authorities if they knew of an orphanage that could use some outside help. They told us of the Luberstat Kinderheim, which received help only from the German Red Cross. That was in February 1958.

One Saturday a group of us reserved a bus and went out to the place, about 30 miles from Bremerhaven. We found they really needed a helping hand.

Through word of mouth, news of the situation at the orphanage got around to others in our crew of Navymen and Marines. On the next trip, in March, a bus went out to the Kinderheim loaded with men and about 12 boxes of used clothing and toys, plus $100 in cash. After getting acquainted, the Navymen promised to be back the next month.

We then took out another $100, boxes of toothpaste, soap and more clothing and toys which had been collected and repaired. On Easter we had baskets filled with eggs and candy, one basket for each child.

Since then, the Security Group has taken the orphanage $100 every month, along with dozens of pairs of new shoes and slippers, a $150 vacuum cleaner, a $200 automatic potato peeler, several new play pens, crates of fruit juice, candy and many boxes of new and used toys and clothing. The children put out a big welcome when we arrive.

The money comes from a donation averaging from 110 to 150 dollars a month. The other items are extra. For instance, if the word is passed that there's a need for toothpaste, within three days there are more tubes of it received than there are service records.

Besides the Kinderheim there are other programs carried out by the Fleet Reserve Association, the ladies auxiliary of the FRA, the Navy Wives, the Navy Officers' Wives, the various divisions and watch sections and individual families of Security Group personnel. They sponsor needy families whose only other support is local welfare and they contribute time and money to other worthwhile charities. At private parties given by our people guests are sometimes required to bring along two or three dollars' worth of food or clothing for a needy family or an orphanage.

Not only that, but Security Group people have helped organize such activities as the Bremerhaven Hoe Downers (a square dancing group) and the Bremerhaven Auto and Sports Club, and have invited local residents to participate in them.

The recipe for our People-to-People work was conceived by our CO, CAPT P. P. Leigh and our Executive Officer, CDR W. R. Cox. It boils down to this—"When you do something for a worthy cause, do it from the heart and not for a 'feather in the cap.' "

The recipe has turned out very well. Thus, we've done our bit to show the people of another land what Americans are really like.—Robert M. Lundien, PN1, USN.

• *Although the Security Group may not have been trying for a feather in its cap, it certainly deserves one.*—ED.

I Remember Scorpion

SIR: Your item earlier this year on USS *Scorpion*—our one-ship Fleet in the Mediterranean before World War I—closed with the note that you'd like to hear more about her. Since I was once her executive officer I believe I can shed some light on her service as station ship at Constantinople (now Istanbul), Turkey, from 1908 to 1927.

First of all, you'd probably like to know what she was doing in Turkey. To understand that you need a bit of background information.

When *Scorpion* began her service as station ship, Turkey (or the Ottoman Empire) covered much more territory than it does today, extending into areas which are now within the borders of Albania, Greece, Yugoslavia and other present-day Balkan countries; along the Red Sea to cover the backstay of the Arabian "book;" and over modern Iraq. In North Africa, what is now Libya was then a Turkish province.

Except for camel caravans and a very few short railroads, sea travel was the only way of getting from one part of the empire to another. Therefore, most countries kept station ships at Constantinople to provide high foreign service personnel with transportation.

These ships were commissioned vessels, but they had no armament. For many years it had been Turkish policy not to allow ships of war from other countries to pass the Dardanelles without Turkish consent. This restriction, designed to protect the Empire from invasion and from "undue foreign pressure," did not apply to the station ships, since they carried only small arms and saluting batteries. Thus, the diplomatic personnel were able to eliminate considerable red tape when they traveled from the Turkish capital to other parts of the empire.

Scorpion was admirably suited for this sort of duty. One of the first American ships equipped with water tube boilers (she had two of them), she had been one of the fastest ships in the United States.

She was considered the best duty in the Navy, and some of her crew who had gone with her to Constantinople in 1908 were still on board when I was executive officer in 1922 and '23. Most of these old-timers were men whose families had come to the United States from areas under Turkish rule, so they had friends and relatives ashore. Quite a few were married to local girls.

One crew member I remember in particular was a chief carpenter's mate named Meena, whose family came from Salonika (now part of Greece). He joined the Navy about 1901, had come over with *Scorpion* in '08 and was still on board in 1923. He spoke English, Greek, Turkish, Armenian, French and German. Most of the other men spoke at least two languages besides English, and they were a great help in dealing with local residents and officials.

Our naval attache in Turkey doubled as *Scorpion's* CO. The other officers of the ship were assistant naval attaches.

Scorpion was interned in 1917. However, not all her crew was confined with her. Before the blow fell, the captain and about half the crew escaped. They eventually wound up in France. The other half, under the executive officer, CDR H. S. Babbitt, remained on board along with the ship's paymaster, doctor and engineer officer. For the duration of World War I, the exec, the paymaster and members of *Scorpion's* crew who acted as interpreters were the only people from the ship allowed to go ashore—and then only on official business.

It didn't take long for this to become tedious. The only reading material aboard, outside of official manuals and such, was a set of the *Encyclopaedia Britannica*. The resourceful executive officer put this to good use in an ingenious plan to keep the men in the ship from being bored to death. He set up a study program. Everyone in the ship read assigned articles in the encyclopaedia. Regular tests were given on the subjects that had been assigned to them.

Once in a while there was a British air raid on the dockyard to break the monotony. Later, when I was exec, I saw this log entry about one of them:

"Bomb dropped near forecastle. All hands took shelter aft. Bomb dropped near quarterdeck. All hands took shelter forward."

Through it all, the ship sat—and sat—the mussels on her hull becoming so thick that Turkish fishermen stopped

by regularly and scraped them off to sell in the markets.

After the war *Scorpion* resumed her duties as station ship under RADM Bristol, who was not only High Commissioner to Turkey, but also Minister Extraordinary and Plenipotentiary with rank of Ambassador and commander of the U. S. Naval Detachment in Turkish waters.

In 1923 a destroyer tender was called in to retube the boilers and *Scorpion* finally went into drydock. When she did, the mussels on her keel (which the fishermen couldn't reach) were found to be two feet thick. Her paint measured one-fourth an inch from last coat to bare metal.

After a thorough overhaul—and I do mean thorough—she came out of the yard to cruise overseas again until 1927, when she returned to the United States. —RADM Thomas H. Robbins, Jr., USN.

• *Thanks for bringing us more up to date on the* Scorpion *with your on-the-spot account. It brings back nostalgic memories of the not-so-old Navy.*—ED.

Back on Corregidor

SIR: I usually stay well clear of all the claims and counter-claims made in your columns, but when I noted the rather puny claims made by *Essex* (CVA 9) in the February issue, I just blew my stack. And rightly so, I think.

If you really want some records for miles steamed, just examine the logs of the now defunct and decommissioned "Jeep" carriers, until recently used by MSTS. They were real steamers. Just ask anyone who served in them.

I was aboard *Corregidor* (T-CVU 58) for 32 months, and though the exact figures are not available to me, I estimate that we steamed between 200 and 300 thousand miles during that period (I was detached in June, 1957).

I do remember one period rather well. I relieved the navigator about the first of September 1956 at San Francisco. We had just come from Mobile, Ala., our home port. Between September and February we made three trips to Yokosuka, Japan, and back, visiting Pearl Harbor twice and Wake Island once in the process.

After that, we left San Francisco, and went back to Mobile by way of Yokosuka, Okinawa, Karachi (Pakistan), Bandar Shapur (Iran), Bahrein, Capetown, and Port-of-Spain (Trinidad). Working from data in a hydrographic office publication, I estimate a conservative 60,300 miles sailed. We arrived in Mobile on 4 Apr 1957.

In the 32 months I was on board, *Corregidor* visited some 16 countries plus Gibraltar and Hawaii. During the 10 months I was navigator, we sailed 70,600 miles.

Now? Are there any more with records to display?—LT William A. Manly, Jr., USNR.

• *If you think there will not be any more records displayed, you have another think coming. It has been our experience that for every person who is sure his ship has set a record, there's someone else who can top it.*—ED.

Ship Reunions

News of reunions of ships and organizations will be carried in this column from time to time. In planning a reunion, best results will be obtained by notifying the Editor, ALL HANDS Magazine, Room 1809, Bureau of Naval Personnel, Navy Department, Washington 25, D. C., four months in advance.

USS *Chicago* (CA 29)—A reunion for former members and survivors will be held in the Chicago area on 6 September. For further information, write to Loren R. Thomas, CSC, USNR, 18 South Third Ave., St. Charles, Ill.

29th Seabees—The 13th annual reunion will be held on 14, 15 and 16 August at the Statler Hilton Hotel, St. Louis, Mo. Details are available from Leonard J. Knoll, 10346 Edgefield Dr., St. Louis 36, Mo.

82nd Seabees—The 13th reunion will be held at the Penn-Sheraton Hotel, Pittsburgh, Pa., on 11 and 12 September. For additional information, write to James Greenwood, 147 Bathurst Ave., North Arlington, N. J.

66th Seabees—The fifth annual reunion will be held on 5 and 6 September at the Captain Shreve Hotel, Shreveport, La. For details, write to J. E. Chandler, Secretary, 66th Seabee Battalion, McLemoresville, Tenn.

Fleet Post Office, N. Y.—All personnel who served at FPO, N. Y., are invited to attend the annual reunion scheduled for 24 October in New York City. For additional information, write to Box 36, General Post Office, New York, N. Y.

USS *Tills* (DE 748)—All who served on board during World War II who are interested in holding a reunion in the New York or Philadelphia area may write to C. N. Eastlack, Jr., 73 North Woodland Ave., Woodbury, N. J.

U. S. Naval Net Depot (Melville), Newport, R. I.—All who were stationed there from 9 Mar 1950 until now, and who are interested in holding a reunion in the Newport area, may write to Kenneth W. Montgomery, West Main Road, Little Compton, R. I.

A Ditty Bag with 719 Dimes

THERE ARE ONLY about two things in this life that you can have for free—one is the clean air that you breathe; the other is a hard, stiff, jolting automobile accident. The first won't harm you; but the sudden stop at the end of that second one can kill you.

During the year 1957, (it was much the same in 1958), one out of every 67 people living in the United States was killed or injured in an automobile crash. The total casualties climbed to a staggering 2,563,700 —just about the equivalent of the combined population of the states of Nevada, Wyoming, Delaware, Vermont, New Hampshire and Idaho. Of these, 38,700 were killed.

Some might say that things like this will happen when they let cars on the road which are in need of repairs. Surprisingly enough, of the 47,650 vehicles involved in fatal accidents, 45,550 (or 95.6 per cent) were in apparently good condition. The figures run even higher for vehicles involved in nonfatal accidents. Of the 2,730,000 cars taking part in these wrecks, 2,665,000 (or 97.6 per cent) were also apparently in good condition.

Admittedly it is sometimes difficult, after a crash, to determine if the brakes, lights, tires and steering of a vehicle were in top operating condition. But the reports submitted by experienced and qualified investigators reflect the opinions that defective vehicles are not a major cause of accidents.

What is an accident? The dictionary says that it is "an unexpected or unforeseen event, generally unfortunate." From this, you could probably draw the conclusion that most automobile accidents occur on wet, snowy or icy roads while driving in fog, rain or snow.

But that isn't the best way to get killed or mashed. If you want to do a good job of it, statistics indicate this is the best way. Drive a passenger car in a straight direction in clear weather on a dry road and exceed the speed limit. Make sure that you drive over the weekend. For the clincher, aim for the hours between sundown and sunup (preferably between one and six in the morning). That's the best formula and the surest way to get yourself scraped off the concrete pavement.

One more point: Make sure the passengers include a machinist's mate, sonar operator, commissary man, radioman, hospitalman and yeoman. If you're going to do a good job of it, you might as well help cripple your ship at the same time.

There are, of course, other suggestions—but these are the type that will get you to where you're going—*and back again.* Here are some:

- Slow down at night or when visibility is poor or obstructed.
- Scan the road ahead.
- Glance frequently in your rear view mirror so you know the traffic picture around and behind you.
- Follow at a safe distance. Be ready for sudden stops.
- Watch for children between intersections.
- Stay in one lane as much as possible. On the highway stay over to the right. Cross the center line only when passing or turning left. Don't weave or hog the road.
- Always signal your intentions to other drivers—they need to know.
- When passing, signal the driver ahead. Be sure he knows you are going to pass. Pass on the left. Don't cut back too sharply—wait until you can see the left front headlight in your rear view mirror. Do not pass on curves, hills, at intersections or in "no passing" zones.
- Prepare for turns and stops by getting into the proper lane well in advance and signaling.

Some 47,500 drivers (88.9 per cent of them men) were involved in fatal accidents—in which 38,700 were killed. It took another 2,713,000 drivers (84.1 per cent of them men) to injure 2,525,000. In a turkey shoot, this would be considered poor shooting. But when it comes to slaughter and licensed mayhem on the highways, it's gruesome.

While you're wagging your head from side to side and clucking your tongue, don't just limit these accidents to youngsters. The drivers who were involved in fatal accidents and

who were *over* 25 years of age made up 73.1 per cent. Drivers in non-fatal accidents over 25 made up 80.1 per cent.

Experience doesn't give anyone the license to take it easy while driving. More than 96 per cent of the drivers involved in fatal and non-fatal accidents had more than one year of driving experience.

Getting back to statistics again, 3810 deaths and 118,800 injuries were attributed to driving off the roadway. Oftentimes, other drivers may crowd you and force you to drive with the right wheels, front and back, off the pavement and on the shoulder of the road.

The first rule is *don't panic.* Don't apply your brakes sharply, or attempt to cut back on the pavement too quickly. Hold on tightly to the steering wheel—and take your foot off the gas pedal. Wait until the speed of your car has been greatly reduced, then—after making certain that your return to the pavement will not interfere with any vehicle which might be following you—cut your front wheels sharply to the left and you will be back on the pavement again. (Check tires for cuts.)

Happy Holiday

During the Memorial Day weekend in 1958 — a typical knock-down, drag-out, haul-off and scrape-up holiday — 371 Americans lost their lives in traffic accidents. Hundreds more were injured.

The Navy and Marine Corps contributed to the statistics with a "grand" total of 77 Navymen and Marines killed or seriously injured—an average of almost 26 per day.

Another of the most common types of accident is the rear-end collision. These are far too numerous, ranging in severity from minor collisions to severe crashes. A collision of this kind occurs because one car follows another car too closely.

Assume that your car and the one ahead of it are both traveling at the rate of 20 miles per hour, and both have the same brake efficiency. A distance of 47 feet is required for stopping from this speed. During the time it takes you to react, you've already gone 22 of those 47 feet.

Thus, if the space between your car and the one ahead is 22 feet or less, you cannot possibly avoid a rear end collision if he should stop suddenly.

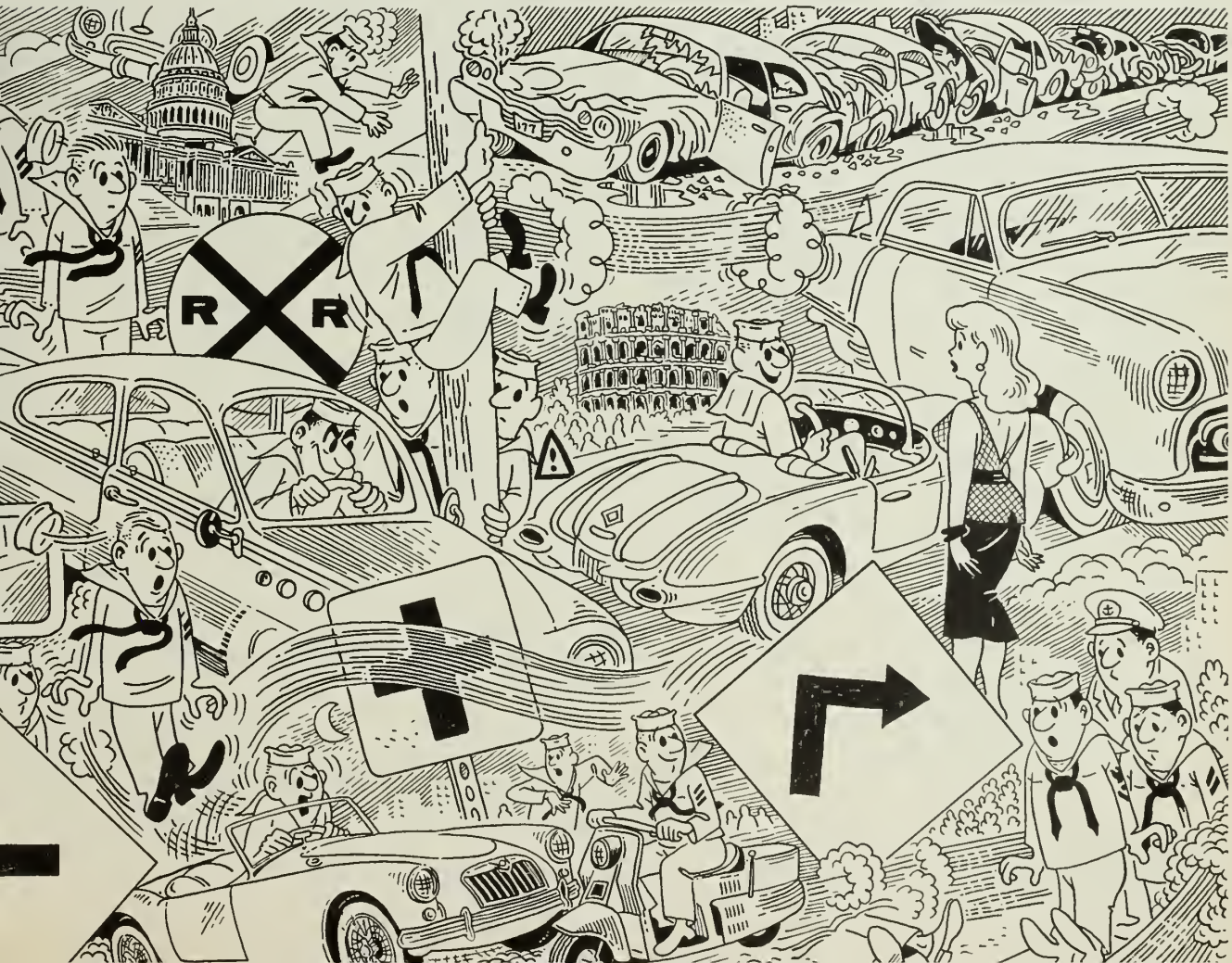
Naturally, as your speed increases, so does the distance you travel during your reaction time.

To be safe, stay the following distances behind the car ahead, at the speeds indicated:

10 miles per hour—one car length.
20 miles per hour—two car lengths.
30 miles per hour—three car lengths.
40 miles per hour—four car lengths.
50 miles per hour—five car lengths.

The next time your shipmate "digs out," tromps down on the gas pedal and starts to fly low, try this—ask him to slow down. While it might not be your car, it is your life. And if he brags about being able to stop the old gas buggy on a dime, ask him if he'll give you as many dimes as it takes him to stop on, at only 20 miles per hour.

If he takes you up on it (at some safe spot), have a ditty bag handy because you'll need it to haul the loot away. A ditty bag with 719 dimes in it weighs quite a lot.



DO YOU KNOW THESE 'RU

CHECK YOURSELF

REST BEFORE a lang trip. Refuse ta drive when yau are ill ar fatigued.

AVOID ALCOHOLIC BEVERAGES. Drink strang caffee ar tea ta help stay alert.

PREVENT CARBON MONOXIDE paisaning by checking yaur exhaust system.

STOP AND REST!—Get aut and walk araund. Pull aff raad far a nap, if necessary.

CHECK YOUR VEHICLE

KNOW YOUR vehicle's history and keep a recard af lubricatian and repairs.

INSPECT CHASSIS for damaged springs, faulty shock absarbers, laase nuts, etc.

SEARCH FOR LEAKS af ail, water, gasaline. Inspect muffler far hales.

EXAMINE TIRES far uneven wear, damage and impraper air pressure. Check spare.

BE SURE yau have enaugh ail, water, gasaline, antifreeze and brake fluid.

CHECK ROAD AND WEATHER canditians that exist an yaur planned raute.

ACCESSORIES —Try lights, harn, windshield wipers, heater and defraster. Adjust rear-view mirrors. Check tools.

KNOW YOUR ROUTE

GOOD ROAD MAPS will help yau ta familiarize yaurself with turns and crassings, places ta stap and type af raads.

FARM AREAS —Watch aut for farm animals, crassings and agricultural vehicles.

PLAINS AND DESERTS —Manatanaus lang stretches af raad may lull yau ta sleep ar tempt you ta speed. Check your supply af gas, water and ail.

INDUSTRIAL AREAS —Congested traffic will slaw yau dawn. Adopt defensive driving and farget "hurry."

RESIDENTIAL AND SCHOOL AREAS —Be alert far children playing, ald falks, shoppers and pets. Obey speed limits. DON'T PASS A STOPPED SCHOOL BUS fram either direction!

NIGHT DRIVING

GET PLENTY OF REST befare a lang trip.

DRIVE AT LOWER SPEEDS than in daytime.

AVOID LOOKING DIRECTLY at appraaching headlights and use right-hand edge af raad as yaur guide.

DEPRESS HEADLIGHTS when meeting anather vehicle and when following anather car.

KEEP HEADLIGHTS ADJUSTED and clean.

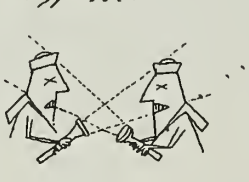
KEEP WINDSHIELD CLEAN for better vision.

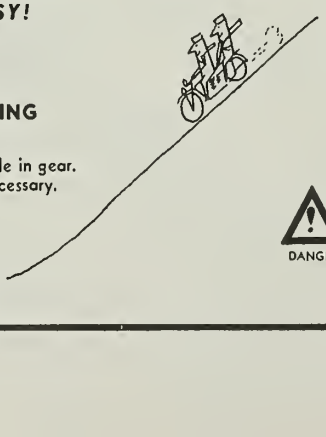
CHECK BATTERY, lights, wiring and flashlight.

PRACTICE COURTESY!

ENGINE AS A BRAKE GOING DOWNHILL

Always drive dawn a hill with vehicle in gear. Brake gently ta reduce speed, if necessary.





LONGER LIFE FOR YCR V

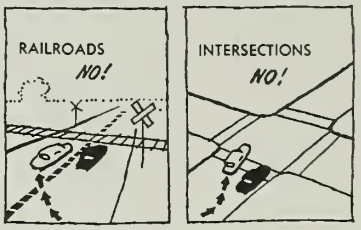
LOCA LAWS

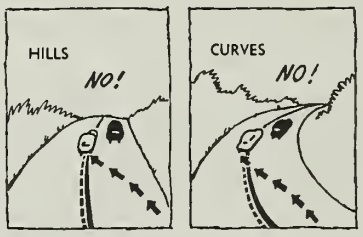
THE NAVYMAN shauld find aut and abs at hame an liberty ar in a new communit a fareign land. Care and caurtesy are

SPECIFIC LAWS, as illustrated here in tect life and praperty under specific laca serve the rights af others.

OVERTAKING AND PASSING

USE CARE AND COURTESY. Dan't cut back in line until yau can see the car yau've passed in yaur interiar rearview mirrar.





SIGNAL FOR S PS A

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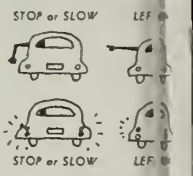
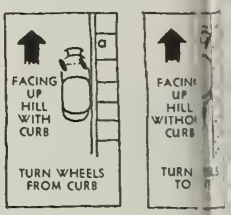


PARKING N HI

SET BRAKES, LEAVE set frant wheels turn lack car when leaving



STANDARD ROAI SIGN

DIAMOND SHAPED
WARNING OF HAZARD

OCTAGONAL SHAPED
STOP!

Eight-sided *STOP* sign means: bring your vehicle to a complete stop.

TRIANGUL SHA

Crossed bars pla

RECTANGULAR SHAPED —

STANDARD SIGNAL LIGHTS

Appraach with reduced speed. Came to FULL STOP when required.

SOME TYPICAL INTERNATIONL T

Prepared by ALL HANDS Magazine

ULES OF THE ROAD'?

VEHICLE AND YOU

WS

acal traffic regulatians when he drives when he drives acrass the cauntry ar in al.

HANDS Magazine, were made ta pra- ditians. Be alert, take time and ab-

S AND TURNS

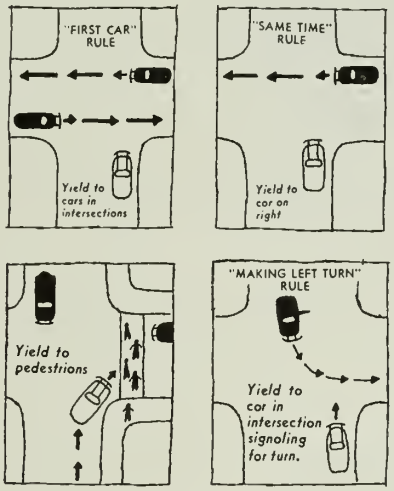
wn, turn ar change pedestrians know r signal.

HILLS

LE IN GEAR and shawn. Always tended anywhere.

RIGHT OF WAY AT INTERSECTIONS

WHEN IN DOUBT, *yield* ta the ather car. Be caurteaus. Keep vehicle under cantral. USE CARE AND COURTESY.



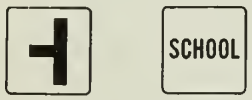
SIGNS U. S. A.

HAPED

ROUND SHAPED
RAILROAD CROSSING

Round sign placed at some distance from the railroad crossing.

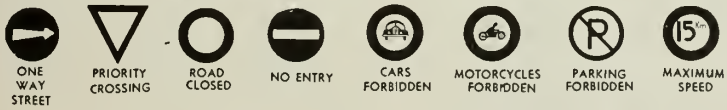
SQUARE SHAPED
CAUTION OR INFORMATION



crossing.

ULATION OF TRAFFIC

TRAFFIC SIGNS—EUROPE



HAZARDOUS ROAD CONDITIONS

HEAVY RAIN—Keep lawer beam headlights and taillights an. Drive slowly!

SLEET—If sleet accumulates tao fast for defroster, pull aver ond don't drive—take "five."

FOG—Stay off the raad unless trip is absalutely necessary . . . then CREEP!

Drive with LOW BEAM headlights.

Avaid sudden staps ta prevent rear-end callisians.

SNOW AND ICE—Keep speed dawn.

Keep car pulling steadily with na sudden changes af direction ar speed.

Fallaw ather cars at langer distances.

Make no sudden use af brake.

Stay in gear ta maintain contral.

Steer in the same direction that the rear end is skidding.

Avaid aversteering. Keep bath hands an wheel.

Keep windshield clean.

Start slowly and in higher gear.

Take it easy, even *with* chains.

WET LEAVES, OIL, DEEP BUMPS, MUD and LOOSE SAND can be treacherous! Slaw dawn!

IF YOU RUN ONTO A SOFT SHOULDER

NEVER try ta get back an the pavement at high speeds.

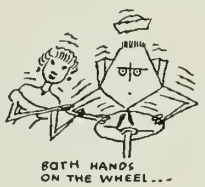
DON'T slam an the brakes.

DRIVE STRAIGHT AHEAD ond slaw your vehicle dawn *gradually*.

COME TO A STOP ar slaw way down.

DRIVE back onta pavement *slawly* and at a *sharp angle*.

IF A TIRE BLOWS OUT



KEEP OFF the brake and gas pedals.

STEERING IS THE IMPORTANT THING. Grip the wheel hard to keep the car on as straight a path as passible.

APPLY BRAKES GENTLY and slawly, keeping the car in gear until yau stap.

CROSSING TROLLEY CAR TRACKS

ALWAYS drive aff the tracks ar straddle ane rail. If yau must cross, bring your car ta a slaw speed and crass *AT A SHARP ANGLE*.

BE SURE TO CHECK behind you and give proper signal far turn you will make.

IN CASE OF ACCIDENT

STOP immediately . . . and, if needed, RENDER FIRST AID and get medical help.

CALL POLICE (civilian or military) and natify yaur commond.

PREVENT OTHER COLLISIONS by directing traffic, placing flares, clearing raad.

IDENTIFY YOURSELF but dan't sign anything.

MAKE REPORT ta praper autharities and insurance campany.

★ ★ ★ ★ TODAY'S NAVY ★ ★ ★ ★

ROUGH GOING — Destroyers rendezvous with ammunition ship *USS Mauna Loa* (AE 8) during operations at sea as winds churn ocean to an angry mass.

Another Nuclear Sub for PacFlt

Pearl Harbor has been designated as the home port for the Navy's fourth nuclear submarine—USS *Swordfish*, SS(N) 579.

She is expected to join the Pacific Fleet this month. In shifting from Portsmouth, N. H., where she was built, to Pearl Harbor, the 2310-ton *Swordfish* will also change its home yard from the Portsmouth Naval Shipyard to the Pearl Harbor Naval Shipyard.

The only other nuclear submarine at present assigned to the Pacific Fleet is USS *Sargo*, SS(N) 583, which was built at the Mare Island Naval Shipyard, Vallejo, Calif.

The Navy's first three nuclear submarines—USS *Nautilus*, SS(N) 571; USS *Seawolf*, SS(N) 575; and USS *Skate*, SS(N) 578, are homeported in New London, Conn.

Swordfish has a complement of approximately 100 officers and men and is under the command of CDR Shannon D. Cramer Jr., USN.

Amphibious Assault Ships

Two well known Navy ships, USS *Boxer* and USS *Princeton* have been designated as amphibious assault ships, LPH 4 and 5. *Boxer* is assigned to the Atlantic Fleet while *Princeton* is serving in the Pacific.

Two other amphibious assault ships are under construction. USS *Iwo Jima* (LPH 2) is being built at the Puget Sound Naval Shipyard, Bremerton, Wash., while the yet unnamed LPH 3 is on the ways at the Philadelphia Naval Shipyard.

YESTERDAY'S NAVY

On 9 Jul 1944 organized enemy resistance ceased on Saipan, Mariana Islands. On 10 Jul 1943 the U. S. and British Navies landed Allied troops for the invasion of Sicily. On 15 Jul 1941 the U. S. Naval Air Station and Naval Operating Base at Argentia, Newfoundland, were established. On 16 Jul 1945 the first atomic bomb test was held at Alamogordo, N. M. On 25 Jul 1866 the grade of Admiral was created and conferred on Farragut. On 30 Jul 1942 the Waves were established.

DDGs from the Keel Up

The Navy's first and second all-new guided missile destroyers, *Henry B. Wilson* (DDG 7), and *Towers* (DDG 9), have been launched. *Wilson* went down the ways at Bay City, Mich., and *Towers* at Seattle, Wash.

These are two of 18 ships designed from the keel up as DDGs. USS *Gyatt* (DDG 1) was converted from a DD to perform missile work.

The new missile-launching destroyers will be primarily concerned with destroying enemy submarines and surface ships. They will also be used, however, to support amphibious assault operations, for antiaircraft and ASW protection of convoys, and for shore bombardment.

DDGs emphasize seaworthiness to meet the all-weather requirements of a screening force. They will be armed with *Tartar* sea-to-air missiles (twin launchers), two 5-inch rapid fire single mounts, and antisubmarine weapons.

The ships are 437 feet long, have a 47-foot beam, and an all-aluminum superstructure. Their engines develop about 70,000 horsepower, which gives them a top speed above 30 knots. Standard displacement of the DDGs is 3370 tons.

Both *Towers* and *Henry B. Wilson* will have improved fueling systems that will permit faster transfer of fuel at sea under all weather conditions. They will also be equipped with integrated weapons control and new radar systems.

Whirling Weapons Carrier

The Navy is testing a new all-weather antisubmarine weapons carrier which is described as the world's largest amphibious helicopter.

Designated as HSS-2, the sub hunter is powered by twin 1050-horsepower gas turbine engines. Its performance characteristics are superior to those of the HSS-1, and also, it can land and take off on the water.

The HSS-2 is said to be the first *real* all-weather helicopter and has the capabilities to give a "terrific psychological boost" to pilots.

Designed to operate from ASW

support carriers, the HSS-2 will be equipped with new-type heavier sonar devices and will be armed with conventional and atomic depth charges as well as the newest type homing torpedoes.

Gas Turbine Whirlybirds

The Navy has awarded a $14-million contract for gas turbine-powered HU2K-1 helicopters. The HU2K-1 is a high-speed, all-weather utility helicopter equipped with automatic stabilization equipment.

The new chopper was developed for a variety of missions such as rescue, carrier plane guard, litter evacuation, transport of externally slung cargo, personnel transport and observation-reconnaissance missions.

A special feature of the HU2K-1 is its self-contained flotation equipment capable of filling emergency flotation bags with gas within two seconds.

Also featured on the HU2K-1 is a retractable landing gear and a four-bladed main rotor.

Rescuing Missile Cones at Sea

A Navy chief boatswain's mate has developed a net-type basket recovery rig to rescue missile nose cones from the sea.

Called the "Halter Recoverey Basket," it was conceived and designed by George J. Halter, BMC, USN. Two other boatswain's mates, W. I. Wilson, BM1, and H. B. Bost, Jr., BM2, helped Chief Halter with his development.

Chief Halter, who was serving in USS *Shenandoah* (AD 26) on the staff of COMDESFLOT Four, was asked along with a number of others, to create a device for getting instruments—and possibly a man-carrying nose cone—out of the water and onto the deck of a ship.

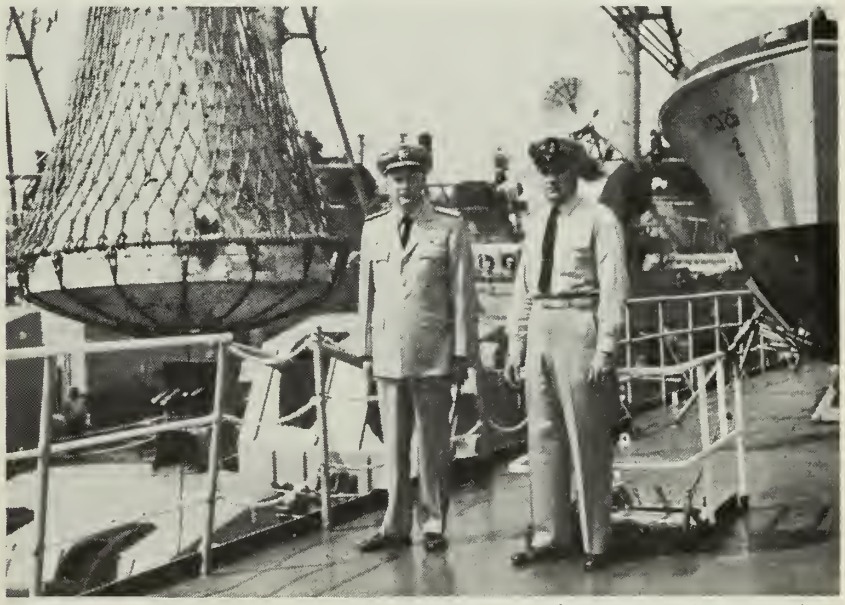
"I got the idea from a movie on commercial fishing," said the Chief. "The basket works much the same as small nets used to scoop fish from a larger one."

The net of manila line is held in shape by two metal rings. When it is slipped over the object, the wire cables on the bottom are pulled together in drawstring fashion.

"It's already been approved," Halter stated. "The problem now is to teach the ships' crews to use it effectively." Although it was primarily designed for the small fast destroyer, Halter's recovery basket can be used by all naval surface-type ships.

"In time, the baskets will be carried by most of the ships in the Navy. Right now we are only making them by specific requests," the Chief explained.

The first basket was constructed aboard USS *Shenandoah* by M. H. Lewis, BM1. It took him nearly a week to complete it. The baskets can now be constructed in less than 24 working hours. They are being made aboard two destroyer tenders.



NET RESULTS—RADM Harry Smith, USN, ComDesFlot Four, and G. J. Halter, BMC, USN, pose by missile nose cone recovery net invented by Chief Halter.

Another Rung Up the Ladder for Top Navy Leaders

Thomas S. Gates, Jr., four years (1953-57) Under Secretary, and two years (1957-59) Secretary of the Navy, who helped guide the Navy through some of the vital stages of its conversion from guns and steam to guided missiles and atom power, has moved into the number-two job in the Department of Defense—that of Deputy Secretary of Defense.

Deputy SecDef Gates

New Secretary of the Navy is William B. Franke, who has been Under Secretary since 1957.

A much-decorated World War II naval intelligence officer, who saw action in France, the Philippines, Iwo Jima and Okinawa, Mr. Gates was planning to return to his investment banking business in Philadelphia when he was called upon to fill the vacancy left by the death of Deputy Secretary of Defense Donald A. Quarles.

Among Mr. Gates' many accomplishments as Navy boss were the introduction of an electronic bookkeeping system which has been called the best in the armed forces, and the inauguration of the Enlisted Scientific Education Program.

SecNav Franke

Mr. Franke, author of the report submitted to Mr. Gates last spring which recommended sweeping changes in the Navy Department, is a native of Troy, N. Y.

Before moving into government work, he was chairman of various businesses, and headed his own firm which specialized in accounting for educational institutions.

He first went to Washington in 1948 as a member of the U.S. Army Comptroller's Panel, and later served as an assistant to the Secretary of Defense, then as Navy Under Secretary.

HEAVY CRUISER *USS Los Angeles* (CA 135) cruises to Pearl and the Far East.

Seagoing Samaritans

Fourteen Chinese Nationalist fishermen, two Amphibious Force Pacific Navymen and the operator of a San Diego water taxi, a disabled merchant ship bound for Bombay and a pneumonia-striken Navyman in a destroyer returning from Pago Pago—all these were among the beneficiaries of the Navy's helping hands in the Pacific in recent months.

• The 14 fishermen were rescued from their grounded and sinking trawler in the southern Pescadores Islands, in Formosa Strait, by USS *Eversole* (DD 789).

Eversole reached the scene, on the south side of Bokoto Island (P'eng-hu Tao), at daybreak, and found the trawler aground full length and listing to port at a dangerous angle. A rescue and salvage party, with LTJG C. W. Riedy, USNR, in charge, was sent over in a motor whaleboat to investigate.

Several attempts were made to get the motor whaleboat alongside the stricken trawler. But submerged rocks, breakers and limited visibility caused by rain and darkness made these attempts unsuccessful.

So, LTJG Riedy returned to the ship and took in tow an empty 25-man rubber lifeboat, which was floated over the rocks and breakers to the grounded craft. The 14 fishermen scrambled aboard with whatever personal belongings they could carry, and the rubber boat was towed to a nearby Chinese Nationalist patrol vessel.

While the survivors were getting aboard the patrol craft, a line from the lifeboat fouled the propeller of the motor whaleboat. The on-shore current set the boats dangerously close to the rocks and breakers. However, N. B. Bruno, SN, USN, saved the day by diving under the boat and cutting the line.

By then, the rescued fishermen were all aboard the patrol craft, headed for home. The rescue and salvage party returned to *Eversole* without further incident—except that on hoisting the lifeboat aboard, a large hole was discovered.

• The two Amphibious Force Navymen and the water taxi operator were saved from the choppy waters of San Diego Harbor by an alert boat crew from USS *Fort Marion* (LSD 22).

The water taxi, after colliding with a mooring buoy near the Naval Station, was sinking rapidly when the two sailors, from the crew of USS *Catamount* (LSD 17), donned lifejackets and followed the taxi operator to the bow of the sinking craft to signal for help.

Their signals were sighted by James Collins, FN, boat engineer of Fort Marion's LCVP. He then directed coxswain James Gaines, SN, to the taxi's aid. In a matter of seconds, the stranded Navymen were taken aboard the LCVP, and a line was rigged to the taxi in an attempt to tow it to safety. The flooding taxi sank, however, and the operator was forced to jump into the water. Charles White, SN, and Donald McLaughlin, SN, of the *Fort Marion* boat crew, threw him a life ring and pulled him into the LCVP, exhausted.

Shortly after the rescue, a boat from a nearby attack transport took the survivors to safety.

• The disabled merchant ship was ss *Wang Buccaneer*.

When spotted by USS *Colonial* (LSD 18), of the Pacific Fleet Amphibious Force, she lay dead in the water approximately 200 miles southwest of Tokyo. She was flying the international distress signal.

Inspection by *Colonial's* repair party disclosed that the 10,200-ton ship—bound from Portland, Ore., to Bombay, India, with a cargo of grain—had blown a tube in each of her boilers. This meant that plugging would be necessary before she could build up steam and continue her journey.

Colonial made the plugs in her machine shop and sent a party over to *Buccaneer* to complete the repair job. The repair party also took along a portable pump to be used in refilling the boilers after repairs had been made.

Later, when the first pump began to operate erratically, a second was

One Hundred Top Tunes for the Navyman

If you hear weird sounds coming from the fantail of your ship or over the horizon, no doubt some boatswain's mate in your own crew or from a distant ship has his hands on a copy of the new *Navy Song Book* and is exercising his vocal cords.

The *Navy Song Book* (NavPers 15047A) has been prepared by the Music Branch of the Special Services Division of the Bureau of Naval Personnel. It has already been distributed to all ships and stations.

Individual copies of this song book are not available, and because of copyright restrictions it is not for commercial use. Commands desiring copies in addition to those received during initial distribution should requisition them in accordance with existing FPSO Instructions.

The *Navy Song Book* was published for use throughout the Navy as it is impossible to purchase a single commercial song book containing songs normally associated with Navy life. It contains 100 songs. Many of them are strictly Navy songs; some are songs of general interest as well as songs of the armed forces, patriotic and favorite holiday songs.

In addition, the new *Navy Song Book* has a special section containing folk songs of foreign lands.

dispatched by whaleboat to help speed the refilling of the merchantman's boilers. But, approaching darkness and heavy seas prevented the completion of this trip. The boat was swamped, and the extra pump went down with it. All the men from the boat were picked up by *Colonial,* which maneuvered alongside them to effect their rescue.

At about 0200 on the morning after *Colonial* had spotted her, *Wang Buccaneer* was able to light off one of her boilers, and her master decided to try to make it to Bombay.

Colonial's repair party then returned to the LSD and the two ships went their separate ways—*Buccaneer* minus one crewman. Her chief mate, injured during the repair of the boilers, had been transferred to *Colonial* so that he could be taken to Okinawa for treatment.

• The peumonia-stricken Navyman—Ignacio M. Sena, SA—was kept alive by the ingenuity of three Navy medical men who jury-rigged a life-saving device from a vacuum cleaner aboard uss *Cowell* (DD 547) at sea between Pago Pago, American Samoa, and Pearl Harbor, T. H.

The life-and-death drama began when LT A. H. Fix, a Navy medical officer serving four destroyers, had to cut a hole in Sena's throat to draw fluid from his lungs.

Medical procedure calls for the use of suction apparatus to pump out the fluid, but there was none aboard the ship. So, Dr. Fix, aided by Chief Hospital Corpsmen Standford Stone and L. C. Meyers, jury-rigged a suction machine from a large vacuum cleaner used on electrical switchboards. Thus, they kept their patient's lungs free of fluid for 12 tense hours.

Sena's condition was complicated by congestive heart failure, which caused most of the fluid.

Cowell had no Xray equipment, and the doctor's stethoscope was virtually useless because of the ship's noise. The sound of the cleaner made hand signals necessary when withdrawing the fluid—a three-minute procedure repeated every half hour.

"There were 240 men in that ship all working for that man," said Dr. Fix after *Cowell* had reached Pearl, and Sena had been safely transferred to Tripler Army Hospital. "I've never seen such cooperation."

The doctor, in describing his experience, said he had faced worse emergencies, but never without proper facilities. "It's like getting training for 1958 medicine and then operating with 1918 techniques."

A Honolulu physician described Dr. Fix's vacuum cleaner apparatus as a "work of genius."

Aid from an AD

A Navy EM club on Taiwan and a Filipino youth who wanted to go to school both got a boost from uss *Bryce Canyon* (AD 36) during one three-week period.

The EM club, at Kaohsiung, Taiwan, was damaged by a fire which burned the walls, furniture and ceiling, and destroyed all the electrical wiring and the air-conditioning unit in the club's Bamboo Room.

News of the event reached *Bryce Canyon* a few hours after the blaze. The ship's skipper, CAPT E. H. Steinmetz, immediately came to the rescue.

He sent a team of carpenters and electricians—plus the necessary material—to the club to help get it shipshape again.

The club, which opened in April 1952, is the only military recreational facility in Kaohsiung for enlisted men of the Fleet.

Three weeks after helping out at Kaohsiung, *Bryce Canyon* presented a $500-scholarship to Rogelio Lim, a 17-year-old boy from Olongapo, Zambales, Philippine Islands. As a result, Rogello is now studying automotive mechanics at the Feati Institute of Technology in Manila, instead of looking for a job as he had originally planned.

The scholarship will cover the cost of Rogelio's tuition, books and living expenses for one year. *Bryce Canyon* established the award to show her appreciation of the hospitality extended to the ship by the people of Olongapo.

Since the destroyer tender *Bryce Canyon* is basically a repair ship, she decided a scholarship in the field of industrial arts would be the most appropriate.

Rogelio was selected by a committee made up of leading educators from Olongapo and RADM A. F. Spring, USN, commander of the Naval Base at Subic Bay.

TESTING—*USS Compass Island* (EAG 153) cuts her way through the sea conducting navigation experiments.

ALL'S QUIET—Guided missile ship *USS Norton Sound* (AVM 1) sits in calm waters after an overhaul. She makes her home port at Hueneme, Calif.

Introducing—The U. S. Naval Weapons Plant

It's got a new name. And it's turning out new products. But the fortress on the banks of the Anacostia is going stronger than ever.

That would be the ex-U. S. Naval Gun Factory, Washington, D. C., which, as of 1 July, has become the U. S. Naval Weapons Plant, Washington, D. C.

Through 160 years of history—from the day of the smooth-bore carronade to the present guided-missile age—the Gun Factory has never faltered in its primary mission of arming the Fleet.

It no longer makes guns, however. Hence the new name, which will more accurately reflect its current mission.

Actually, the title of Naval Gun Factory is of recent origin, dating only since 1945. Before that the site was officially known as the Washington Navy Yard.

Ordnance, however, has been one of the more important functions of the Yard from the start. Powder, shot, pistols, gun carriages, sights and other material have been made there. The Yard's location, near the Navy Department, made it the logical place to conduct trials and experiments of new ordnance advances. Thus it became the center for design, testing and development of naval weapons.

First big step in the conversion of the Navy Yard into an ordnance plant came in 1847, when the Bureau of Ordnance established an independent department there. Lieutenant John A. Dahlgren, USN, called by many the "father of naval gunnery," was installed as director of all ordnance matters.

The General Order of 14 Aug 1886, which established a Gun Factory within the Yard, caused further concentration on ordnance manufacture. The Gun Factory grew rapidly in succeeding years as the defense of the nation through four wars placed a premium on advances in the design and production of better naval weapons.

Today the Naval Weapons Plant and its allied Naval Ordnance Laboratory are busily turning out radically newer and more potent products—the guided missiles, rockets, controlled torpedoes and other weaponry needed to keep the modern U. S. Fleet strong and ready.

Help Arrives from Antarctica

The icebreaker USS *Edisto* (AGB 2) and two of its helicopters played major roles in the rescue and evacuation of flood victims in the Uruguayan cities of Trienta and Paso de Los Toros this spring.

The two whirlybirds, one an HUL utility craft equipped with pontoons and piloted by LTJG Howell H. Purvis, USN, and the other an HRS-type operated by LTJG Allen M. Erickson, USN, and ENS. Richard M. Nelson, USN, belonged to Helicopter Utility Squadron Two based at NAS Lakehurst, N. J. They were aboard *Edisto* for a temporary assignment in the Antarctic.

Edisto was en route to Buenos Aires, Argentina, from Antarctica when word was received that Uruguay was being inundated by the worst floods in its history, and that much of the country was in a state of emergency.

She immediately diverted to Montevideo, Uruguay's capitol city, and sent two copters to help.

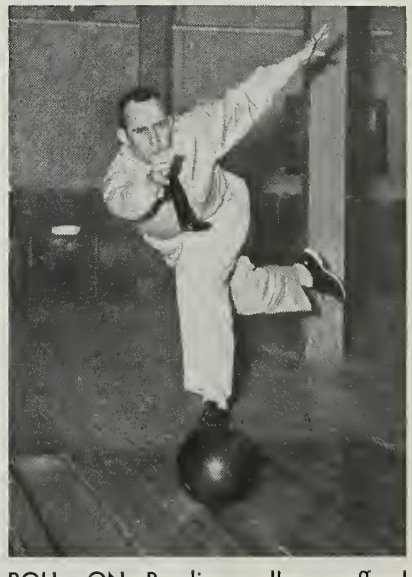
LTJG Purvis, crew member Eugene M. Davis, AD1, USN, and an Uruguayan army interpreter flew into the interior and set up a base of operations at Treinta y Tres.

Flying in a 20-mile radius east of that city, they battled high winds and strong currents to rescue 31 persons in 48 hours.

The second copter, with crew members Kenneth Forrester, AD1, USN, and Paul F. Noonan, PH1, USN, also aboard, assisted in completely evacuating Paso de Los Toros, and flew in explosives for use in blowing a diversionary channel around the threatened hydroelectric dam there.

Both aircraft also took part in the evacuation of the city of Mercedes, bringing in food, clothing, etc.

Edisto, whose skipper, CDR Henry D. Davidson, USN, recently completed a two-year tour of duty as Chief, Navy Military Assistance Advisory Group in Uruguay, contributed all possible food and medical supplies to the disaster areas.



ROLL ON—Bowling alleys afford Navymen recreation and competitive sport at Navy shore establishments.

Just What the Doctor Ordered

"Adult psychology" has been tried by a Navy Unit in Japan to get the men to take their "medicine," and like it.

The medicine, in this case, is "15 minutes of daily exercise" ordered for certain naval aviation commands in the Pacific by COMNAVAIRPAC. The object is "developing and maintaining physical conditioning."

The order didn't prescribe exactly how this should be carried out although it did mention a word that causes reactions raging from shudders to nausea—"calisthenics."

LTJG Robert J. Zawasky, USN, Special Services and Athletic Officer on the Staff of COMFLTAIRJAP based at NAS Atsugi, reasoned that the men would enjoy their exercise if they could get in competitive sport.

The first problem was to determine what sport would interest everyone and be within the widely varying athletic abilities of the approximately 130 persons at the staff headquarters. Second, how could the program be carried out without interfering with necessary work or cutting into off-duty hours? And third, how could enthusiasm be maintained day after day?

The first problem was solved through a questionnaire asking all hands whether they would prefer volleyball, badminton, or any write-in choice of another sport. Volleyball won an overwhelming victory. No other single sport received much

support, but the write-in choices ranged from checkers to judo.

Volleyball players were organized into teams by departments with the larger ones having several teams. Extra men were given to each team to allow for men on watch.

Ten teams now meet daily and play a 21-point game. Competition is growing keener with each day of play and departmental rivalry adds to the zest.

The way things are going, volleyball seems headed for the big time on the Staff of COMFLTAIRJAP with departments now dickering over player swaps, bonus clauses and the like. They may even need to appoint a commissioner to arbitrate disputes.

Volleyball has also proved to be a sport in which the youngest are not necessarily the most able. The only undefeated team has only one player under the age of 30.

Records are kept of each day's play and current plans call for the eventual distribution of trophies paid for from the COMFLTAIRJAP staff recreation fund.

As Tom Sawyer proved long ago, the easiest way to get people to do something is to make them enjoy it.

—C. K. Ferguson, JO1, USN.

Portable Ring

A portable boxing ring which can be set up on the helicopter deck of USS *Hermitage* (LSD 34) has proved to be a definite morale booster and provides more seagoing recreation for the ship's crew and embarked Marines.

Made from materials found aboard ship, the regulation-size ring was constructed under the supervision of G. V. Freeman, MMC, USN. It has since provided hours of entertainment in the form of boxing and wrestling matches.

The ring was also the center of attraction during *Hermitage's* first smoker held while participating in *Brigadelex* 59 with PHIBRON 10 in the Caribbean.

Scheduled boxing matches are limited to three two-minute rounds while the grunt and groaners are limited to two falls or a 15-minute time limit.

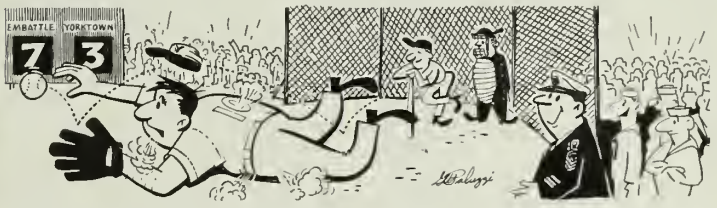
The ring has added recreation to many days of rigorous training and has given the Navymen a chance to match their prowess with the shipboard Marines. So far, the sailors have defeated the Marines in two out of three matches—a record which *Hermitage* hopes to maintain.

SIDELINE STRATEGY

EVER SINCE the days of 'way back when' salty yarns have been told and retold about the underdog or little guy coming through and killing the giant.

Well, to retell a modern Navy version of an old Biblical story—David caught up with Goliath again. This time, however, the scene of action was in WESTPAC instead of the Middle East. To be more exact, at the U.S. Naval Base, Subic Bay in the Philippines, from whom ALL HANDS heard this story.

In this case, David was the softball team from the tiny nonmagnetic ocean minesweeper USS *Embattle* (MSO 434). The giant was the "invaders" from the antisubmarine support carrier USS *Yorktown* (CVS 10).



It all began with a teaser sent out from the fewer-than 75-man MSO which said: "*Embattle* challenges *Yorktown* to softball game . . . . . request you *do not* accept unless you can field competent, well coached team of professional caliber. . . . ."

Game and cocky, you say—but *Embattle* didn't stop there. "Augmentation of your eight escorting destroyers, embarked staff and others authorized as necessary," the message continued. "Intend accomplishing our mission of sweeping the field but desire sufficient competition to provide adequate workout . . . loser buys for all."

Without any hesitation or concern, the mighty *Yorktown* with over 2000 officers and men on board—and a couple of thousand more aboard her escorts, replied:

"Have recalled our scrub team from Spring training . . . . . re your kind invitation. Consider your alleged sweeping capability based solely on embottled courage. . . . ."

What more could you expect from a 33,000-ton giant, you say. But, they hit the little fellow again with this:

"Presume you have sufficient personnel to field regulation nine-man team. Recommend you reconsider your challenge if morale a problem in your command. *En garde.*"

But David didn't back down.

Game time came and both the giant and the little guy showed up. The game was played—and much to *Yorktown's* surprise, the Biblical story was reenacted. The giant was undone. Cause of undoing: No slingshot, but the bats of *Embattle* that knocked in seven runs. *Yorktown* was in there pitching, but came out on the short end of a 7-3 score.

After the game, the flattop silently put to sea. No additional messages on this subject have been intercepted.

★ ★ ★

Here's another story about the little guy being the giant killer. But this time, it's a gal—Mrs. Joan Dull, the wife of an SOC on the staff of the Sub School at New London. She hauled in a 51 pound, 8 ounce Channel Bass at Cape Hatteras, N. C., and established a new Women's World Record in the 12-pound line test class. How about that, Mac!—H.G.B., JOC.

THE WORD

Frank, Authentic Advance Information On Policy—Straight From Headquarters

• **DEEP FREEZE, ANYONE?**—General medical officers and flight surgeons under 45 years of age are needed for Operation Deep Freeze V which is scheduled to depart for the Antarctic in the fall of 1959.

Regular Navy medical officers, Reserves, or men in the graduating class of interns will be considered. Those selected will be ordered to Davisville, R. I., for several months' special training before leaving for New Zealand and Antarctica.

Members of the Deep Freeze V team will be returned to the United States in the spring of 1961. After the tour in Antarctica, all possible consideration will be given to preference for the next duty assignment.

Volunteers should notify BuMed by dispatch.

• **SIDE TRIPS**—If you're stationed overseas, and would like to take a side trip while on your way back to the United States under transfer orders, you may be authorized to do so—but NOT at government expense.

Here are some points to know:

• Authorization to travel other than by a direct route *must* be obtained from the Chief of Naval Personnel.

• Reimbursement for travel will be based on the most direct route from your present duty station to your new duty station.

• Travel time used in excess of that required by the most direct route will be charged as leave.

So if you're stationed in England, for example, and would like to visit Italy en route to the U. S., your request to do so may be approved by the Chief of Naval Personnel for your convenience, but the Navy won't pick up the tab for any extra money or travel time you expend.

• **GOING UP**—A total of 1237 names are on this year's lists for the WO, LDO and Integration Programs.

The selection board convened by the Secretary of the Navy in February picked 597 applicants for temporary warrant officer (W-1), 531 for temporary LDO and 109 for the Integration (seaman-to-admiral) Program. These appointments are contingent on the fulfillment of all administrative requirements by the selectees.

Appointments to warrant officer, W-1, will take place from time to time as vacancies occur. Individual notifications will be forwarded when the appointments are to be made.

Because of the large number of temporary LDO selectees, they will be split into two groups for the LDO indoctrination course at the Naval Schools Command, Newport, R. I. The first group will report to Newport on 8 Jan 1960 and complete the course on 26 February. The second will report on 26 February and complete its indoctrination on 15 Apr 1960. All LDO selectees will be commissioned on 9 Jan 1960, either at Newport or at their various duty stations, depending on which group they are in.

Those selected for the Integration Program will report to the Officer Candidate School at Newport on 28 Sep 1959. School will convene on 5 October, and commissioning will take place about 5 Feb 1960 for those who successfully complete the course.

The selections were announced in BuPers Notice 1120 of 13 Apr 1959.

• **NUCLEAR WEAPONS TRAINING CENTER**—Special Weapons Training in the Atlantic Fleet has been consolidated by the establishment of a new Navy Nuclear Weapons Training Center at Norfolk.

As a result of this move, two former commands—the Special Weapons School at FTC Norfolk, and the Special Weapons Unit at NAS Norfolk—have been abolished.

The new school is operated under the military control of COMTRALANT, RADM H. H. Henderson, USN, and is commanded by CAPT Francis W. Ingling, USN. It has a staff of 150 officers and men.

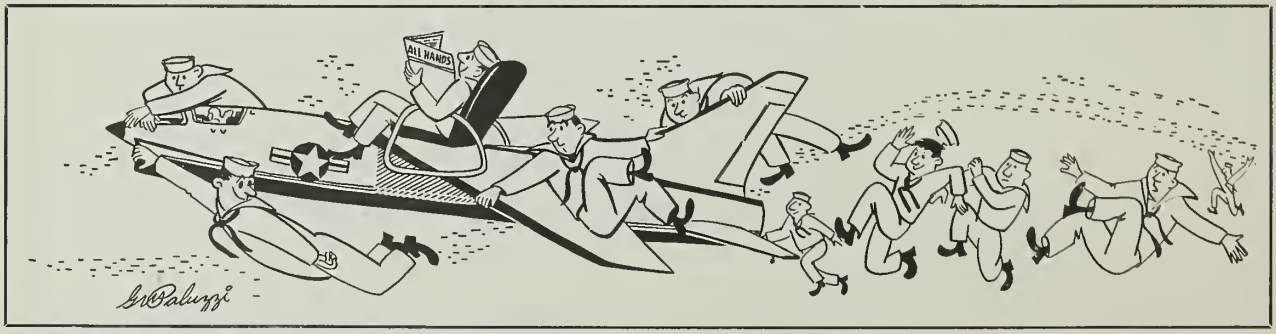
The Nuclear Weapons Training Center offers two courses of instruction. One, for officers, conducts orientation and employment courses in nuclear weapons and guided missiles. The second, the Technical Training School, conducts courses for both officers and enlisted personnel. It features the assembly, inspection, maintenance and storage of nuclear weapons.

• **QUALS MANUAL CHANGES**—As another step in the program to streamline the Navy's rating structure, Change No. 12 to the *Manual of Qualifications for Advancement in Rating*, NavPers 18068 (Revised), has now been incorporated in the "quals."

Major items added by the change concern the qualifications for advancement in:

The new emergency rating of Stevedore (ESB), which was formerly an emergency service rating under boatswain's mate (BM).

The new general rating of Ship-



DON'T FLY OFF with ALL HANDS Magazine. There are nine other Navymen waiting for their chance to read it.

fitter (SF) and the service ratings of Metalsmith (SFM) and Pipefitter (SFP). These supersede the two separate general service ratings of Metalsmith (ME) and Pipefitter (FP).

The general rating of Sonarman (SO) at pay grades E-6 and E-7; the service ratings of Sonarman S (Submarine), Sonarman A (Airborne) and Sonarman G (Surface) at pay grades E-4 and E-5; and the service rating of Sonarman O (Oceanographer) at pay grade E-4.

The rating structure is being altered to provide for:

A single integrated system which is the same in peacetime and wartime for either Regulars or Reserves.

Generalization at the higher pay grades wherever possible.

And, specialization—through the establishment of Service Ratings—in areas where specialization is necessary.

A number of minor items, mainly of administrative interest, are also covered in Change No. 12.

• **TEMPORARY JGs**—Officers of the Regular Navy with ensign dates of rank during calendar year 1956 will be eligible for permanent lieutenant (junior grade) during calendar year 1959.

The cognizant people in the Bureau are passing on a reminder that "it cannot be emphasized too strongly that the aforementioned officers have a promotion physical conducted about two months in advance of the third anniversary of their date of rank as esign."

This action was earlier directed by BuPers Notice 1425 of 20 May 1959.

• **BUPERS MANUAL**—Information on all sorts of subjects has been brought up to date by Change No. 33 to the *BuPers Manual*. The change concerns such topics as:

Pay rates for Scuba divers.

The authority of commanding officers to commute rations.

Instructions for the preparation of correspondence.

The Reports Management Program.

Extensions of enlistment and agreements to remain on active duty.

Leave, proceed and travel time for enlisted men.

Transportation of prisoners under guard between naval commands.

Emergency leave travel from overseas stations via MSTS or MATS.

Qualifications and eligibility requirements for UDT men and divers.

Use of the Activity Diving Log and the Record of Dive Form.

Use of NavPers Form 2696—"Report and disposition of Offense(s)."

Separation of enlisted men while in custody of civil authorities.

The inclusion of a synopsis of the conduct record in the convening authority's initial action, in court-martial cases where the adjudged sentence includes a punitive discharge for the Navyman.

The authority of naval attaches and chiefs of naval missions to approve foreign travel by personnel attached to their staffs who are in a leave status.

• **SUBMARINE OFFICER TRAINING**—One hundred fifty-four naval officers have been selected to begin training at the U. S. Naval Submarine Base, New London, Conn., as submarine officers.

Classes are scheduled to begin on 6 Jul 1959.

BuPers Notice 1520 of 11 May 59, which named this year's selectees, also asked for applications from officers for the next class which convenes in January 1960.

Officers in the grade of lieutenant (junior grade) whose date of rank is on or after 1 Jan 1957, and ensigns whose date of rank is on or before 1 Jan 1959 are eligible for the school.

Applications should reach the Bureau no later than 15 Aug 1959. Complete eligibility requirements and information about the school are listed in BuPers Inst. 1520.6G.

• **EMs SELECTED FOR COLLEGE**—More than 200 Navy enlisted men have been selected for college training programs.

A selection board named 100 for the two-year Navy Enlisted Advanced School Program (NEASP) and 130 for the four-year Navy Enlisted Scientific Education Program (NESEP). The Marine Corps had earlier selected 50 enlisted personnel, including one woman, to take part in NESEP.

The 230 Navy selectees and the 50 Marines will begin their college training this fall.

If you are interested in applying for either of these programs, you should consult BuPers Inst. 1510.69C. Detailed information on the NEASP and NESEP can also be found in the August 1958 issue of ALL HANDS.

QUIZ AWEIGH

Since we stressed naval aviation last month, this month we'll take off with a few questions on the flying Navy.

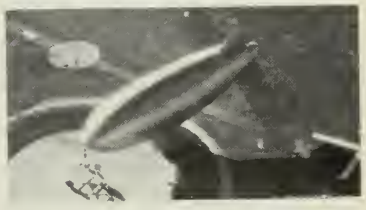
1. This operational swept-wing fighter is a general carrier and all-weather interceptor. It's the (a) *Fury*, (b) *Demon*, (c) *Skynight*.

2. The F3H-2N is armed with four 20mm cannon and a wide assortment of bombs, rockets and guided missiles. Its range is greater than 1000 nautical miles and it attains speeds greater than (a) 600, (b) 800, (c) 1000 knots.

3. Here's USS *Forrestal* (CVA 59), which was commissioned in October 1955. She's equipped with four steam catapults, displaces 76,000 tons when fully loaded and cruises in excess of 30 knots. Her over-all length is about (a) 975, (b) 1040, (c) 1100 feet.

4. The Navy's first "super" carrier is a far cry from the first ship designed and built from keel up as an aircraft carrier. That ship, displaced only 14,500 tons, was 769 feet in length and was commissioned in 1934. She was (a) USS *Lexington*, (b) USS *Saratoga*, (c) USS *Ranger*.

5. The non-rigid airships which the Navy uses for AEW and ASW are commonly called (a) zeppelins, (b) blimps, (c) dirigibles.



6. In 1957, ZPG-2 established a new world's endurance and distance record. During that voyage the 347-foot airship traveled 8690 miles, point to point. She was aloft more than (a) 11, (b) 13, (c) 15 days.

Check your altitude on page 45.

THE BULLETIN BOARD

Hot Weather Got You Down? Think About Duty at Argentia

NOW THAT SUMMER is here you may want to get away from the heat and go north. Well, with orders to Argentia, Newfoundland, in hand, you'll find it cool, man, cool. So, prepare yourself.

Here's a report on what to expect:

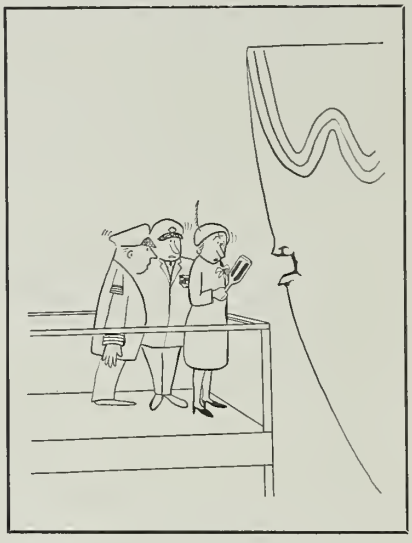
First of all, being ordered to Argentia (as well as to practically any duty station) will cause certain inconveniences. For example, it will mean being separated from your family for a few months, since no concurrent travel is authorized to Argentia. You must be aboard the station and be assured of adequate housing before your dependents will be authorized to join you.

Housing — Government quarters for dependents at Argentia are available only in limited numbers. Therefore, it is necessary to maintain waiting lists which are often quite lengthy. No arrangements may be made for moving your dependents to Argentia without permission of the commanding officer. This also applies even if you plan to reside off the station because you are not permitted to live off the station without the approval of the CO. All off-station housing must be approved for adequacy and sanitation.

Public quarters are equipped with furniture, electric stoves, refrigerators, table and floor lamps. Furnishings such as washing machines, vacuum cleaners, blankets, linens and curtains are not provided. If you have these items, you should make arrangements to bring them to Argentia with you. If you own a deep freezer, you should definitely bring it along as it is practical for storing fish and game, as well as seasonal fruits and vegetables.

Long before your family is scheduled to depart for Argentia, you should check with the Public Works Property and Supply Section so you can determine exactly what to have shipped from the States. Only items which you will actually need should be included, since facilities for storing household effects are not available. Arrangements should be made

All-Navy Cartoon Contest
D. R. Stoner, PN3, USN



with your Supply Officer in the States to have your execessive household goods stored. (See paragraph 29003-4f *BuSanda Manual.*)

Electrical outlets in government quarters run 110/220 volts, 60 cycles, alternating current.

Off-station housing in neighboring Newfoundland communities is generally substandard in insulation, plumbing, heating and sanitation. In addition, the condition of the roads in the winter often makes it practically impossible to commute.

Transportation — When you have been assured of housing, then your next step is to make arrangements for your family to join you. Government transportation of dependents to Argentia must be requested from the Chief of Naval Personnel after entry into Newfoundland has been approved by the Commanding Officer, U. S. Naval Station, Argentia.

In order to obtain government transportation you must submit a request to the Naval Station Personnel Transportation Officer, who prepares the necessary papers for forwarding to the Chief of Naval Personnel.

At present, MATS schedules flights to Argentia from McGuire AFB, Trenton, N. J., and MSTS schedules surface transportation from New York City. All methods of transportation are arranged for by the Bureau of Naval Personnel only upon receipt of a request initiated by you at Argentia.

Your dependents *do not need* passports to travel to Argentia. A letter in lieu of a passport is acceptable to Canadian Immigration authorities, and is issued by the commanding officer for those authorized to live on or adjacent to the naval station. Dependents traveling to Newfoundland by other than government transportation are required to show proof of U. S. citizenship.

Medical Information—Before your dependents are allowed to travel to or from duty in Newfoundland they must meet the following immunization requirements:

General: Smallpox, typhoid-paratyphoid, and tetanus-diphtheria shots are required. Children between the ages of two or three months and seven years are required to be immunized against diphtheria, pertussis (whooping cough), and tetanus (DPT). Poliomyelitis vaccination is required for all personnel under 40 years of age.

Specific: Smallpox: Infants as young as one month should be vaccinated (unless the doctor says otherwise) before traveling to Argentia. If result is negative, the vaccination shall be repeated as often as necessary, at intervals of not more than 10 days, until positive results are obtained. Revaccinate every three years. DPT: Basic series and reimmunization at ages 18 months, four and seven years. Age 10 reimmunize with half-dose adult tetanus with diphtheria. Typhoid-Paratyphoid: Basic series of reimmunization at four-year intervals. Tetanus with Diphtheria: Basic series or reimmunization at four-year intervals. Poliomyelitis: Basic series. However, travel will not be delayed for any except the first dose.

The Navy does not allow women pregnant beyond 180 days to use government transportation. (In cases of pregnancy a signed statement by

a medical officer or civilian physician attesting to the duration of pregnancy must be forwarded to the Chief of Naval Personnel. A signed duplicate copy of this statement must be carried by the dependent.) Infants under six weeks of age will not be accepted for transportation via government aircraft or MSTS ships.

Navy dependents will be required to have a physical examination before departing for Argentia. Facilities are usually available at the port of departure. Chest X-rays are highly desirable before embarkation.

Baggage — If your dependents travel by government aircraft they will be allowed 65 pounds of baggage per person, unless additional allowance is authorized in their orders. Hold baggage via MSTS is allowable at 350 pounds per person over 12 years old and 175 pounds for children.

Excess baggage and household effects may be shipped via first available cargo ships from either the Naval Supply Center, Norfolk, Va., or NSD Bayonne, N. J. It should be plainly marked "For further transshipment to Naval Station, Argentia, Newfoundland." Arrangements for shipping should be made through the Supply Officer at either of these activities.

At least one cargo ship leaves either Bayonne or Norfolk for Argentia every three or four weeks. Shipments from Bayonne are usually faster than those originating from Norfolk.

Pets—With the exception of Eskimo, Husky and Alaskan dogs, you can take pets to Argentia with you. However, they cannot be transported in government aircraft. They can be shipped aboard MSTS ships in the summer months only. Before you ship an animal to Newfoundland it is recommended that you check current regulations and requirements, as they are subject to change. Rabies and distemper immunization certificates from a veterinary are required, and all animals must be registered upon arrival by the Provost Marshal. Animals must wear a collar or harness bearing the pet's name and that of the owner.

Arrival of Dependents—Naturally, you are expected to meet your dependents upon their arrival at Argentia. In the event that you are unable to meet them upon arrival, the Air Transport Duty Officer will contact either the Officers Wives Club or the Enlisted Mens Wives Club to assist them. Both clubs, upon request, will provide any services desired. These clubs are usually prepared to furnish dishes, utensils and linens on a loan basis if your household effects have not arrived.

Automobiles—You are encouraged to take your car to Argentia with you. Upon doing so, however, you will be subject to certain controls and custom regulations. Automobiles may be shipped through the Naval Supply Depot, Bayonne, N. J., without advance consent of the Supply Officer, providing space is available without displacing government freight.

Vehicles must be registered by the owners at the Canadian Customs Office located in the Canadian Railway Depot in the town of Argentia. Such registration is effective for six months only and must be renewed every six months thereafter.

If you take your car to Argentia, you cannot sell it without approval from the Provost Marshal's Office. Also, you cannot purchase a car from another Navyman without the Provost Marshal's approval.

Privately owned vehicles must be registered in Newfoundland and all drivers of privately owned vehicles must obtain a Newfoundland driver's license. Insurance valid in Newfoundland is required in the minimum amounts of $5000/$10,000 public liability and $5000 property damage. Both driver's license and license plates may be obtained through the Registrar of Motor Vehicles in St. John's.

The climate at Argentia is conducive to rust. Particular trouble is encountered with the chrome trim and bright work on automobiles. Purchase of a new car specifically for use during the tour of duty in Argentia is not recommended. The high winds and driving snow of winter and the cool summer temperatures make convertibles impractical. No garage facilities are available, therefore, private vehicles must be

HOW DID IT START

Navy's First Dirigible

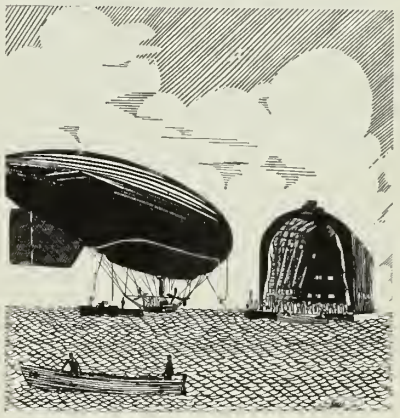
The first dirigible to be constructed for the Navy was begun in the fall of 1915 and not completed until early in 1917. This was later referred to as the "A" class dirigible and officially known as the DN-1.

The specifications for the non-rigid dirigible called for it to be 175 feet long, 50 feet high and 35 feet wide. It had two four-bladed propellers powered by a 150-horsepower gasoline engine. The airship was designed to carry a use-load of 2000 pounds at 25 miles per hour and to rise 3000 feet without disposing of ballast The original cost was approximately $45,000.

After passing her builder's tests the DN-1 was dismantled and shipped to Pensacola in December 1916. Here she was reassembled and the first official flight tests were made during 20-27 April 1917.

In these tests the DN-1 flew across Pensacola Bay, around Santa Rosa Island, circled Pensacola, made two landings on the water and returned to her hangar. The hangar, incidentally, was the Navy's first floating hangar and was undergoing tests at the same time.

During her first flight, which lasted two hours, the dirigible consumed only 22 gallons of gasoline yet maintained a cruising speed of 30 to 35 miles per hour.



Later improvements led to the Class B and Class C dirigible and in 1923 the huge rigid *Shenandoah* was commissioned.

In 1924 the German-built ZR-3, *Los Angeles*, flew across the Atlantic and was delivered to the Navy at Lakehurst, New Jersey. *Los Angeles* remained in service until she was dismantled.

parked outside in designated areas. Older model cars are recommended for use in Newfoundland.

Schools — Navy-operated schools (The Arthur L. Bristol School) conform with the standards prescribed by the Chief of Naval Personnel. The Navy's dependent educational program at Argentia is divided into three parts: Kindergarten, Elementary and Junior-Senior High School.

Kindergarten is for children of ages five and six who do not meet the age requirements for entry into the first grade. Children who have not been in kindergarten before coming to Argentia will not be permitted to enroll after the sixth week of the fall semester. Those who have been in kindergarten before will be accepted on a regular transfer basis.

As kindergartens are not included in the Department of Defense Overseas Dependents Schooling Program, a nominal tuition is charged. The tuition naturally depends on the number of children enrolled. During the last school year the tuition was $3.00 per week for the morning session and $2.00 per child per week for the afternoon session.

The elementary school consists of grades one through six. A child not previously enrolled in first grade must reach his sixth birthday by 31 December of the school year currently in progress to be eligible for the first grade.

The Junior-Senior High School consists of grades seven through twelve. The high school is accredited by the North Central Association of Secondary Schools and Colleges and offers a curriculum designed primarily as a college preparatory course.

A parochial school is also available to a limited number of Navy dependents for grades one through 11 at nearby Freshwater, Newfoundland.

A number of college extension courses are offered through the University of Maryland Overseas College Extension Program. These courses cost about $10.00 per credit hour. Most courses carry three credit hours.

Bus transportation to and from school is provided for all students including those who live off the base. Additionally, transportation is provided for the elementary students living on the base to permit them to eat lunch at home. The Junior-Senior High School and off-base elementary students must bring a lunch as there are no cafeteria facilities available.

"Better not, I don't like the look in his eyes."

The school term usually begins the last week in August and is completed about 1 June of the following year. The early commencement date provides about two weeks head start and enables students who must return to the United States during the school year to lose only a minimum amount of classroom work.

Medical and Dental Care—Facilities for handling routine medical care are available at Argentia for dependents. Elective surgery is not permitted at outlying stations, but routine and emergency medical or operative treatment is available. There is no charge for outpatient treatment, examinations, and consultations for dependents. A daily charge of $1.75 per day is required for hospitalization.

Dental facilities at Argentia are taxed to the limit. Accordingly, only limited dental treatment may be administered to dependents of military personnel except in emergencies. It cannot be too strongly emphasized that dependents must arrive at Argentia with no dental deficiencies. Therefore, dependents should obtain a complete dental check-up and a signed statement of dental fitness before departing from the United States.

If eyeglasses are required for adequate vision, it is recommended that dependents have in their possession the correct prescription, and an additional pair to allow for breakage.

Weather—Winter storms are frequent in Argentia and it is not unusual for them to last for two or three days. These storms are extremely variable, with rain and gale winds that are followed frequently by snow. In general, you can expect between five to 10 inches of snow monthly from November to March. High winds with snow may result in drifts several feet deep, but the snow usually melts within a week since warm southerly winds prevail at Argentia even in winter. Temperatures of 50 degrees in February and March are not uncommon.

Because of its flat terrain and water boundaries, Argentia is exposed to excessive winds. Calm days are rare. Southerly winds prevail from April to December, after which the predominant winds are northerly.

A high relative humidity prevails at Argentia owing to the proximity of Placentia Bay. Fog is quite common in July and August, and on some occasions, lasts for long periods of time.

Clothing—Medium weight clothes are suitable most of the year but a sturdy raincoat (not plastic), and galoshes—or overshoes are essential. The high winds in Argentia make umbrellas impractical.

For the severe winter weather, a parka or some such hooded garment with detachable fur or felt lining is suggested. Slacks, woolen skirts, suits and fur coats are practical. Cocktail and evening dresses are suggested for social events but are scarce and expensive if procured locally.

Go easy on bringing summer clothing to Argentia as there aren't too many days, even in August, when it will be warm enough for them.

For children, it is advisable to bring lined boots or galoshes, heavy snow suits and stout shoes. It would also be wise to bring the next size shoe for the children, and to fit the boots to these. Limited quantities of shoes and boots are available for children at the Navy Exchange.

Both boys and girls may wear blue jeans or overalls for school. Flannel shirts and flannel-lined jeans are practical. A heavy raincoat is a necessity.

Exchange and Commissary Facilities—The Navy Exchange Retail Store offers many articles including toiletries, newspapers and magazines, to-

bacco products, small appliances (hi-fi, radio and phonographs, washing machines, etc.), jewelry, toys, sporting goods and kitchenwares. In addition, it stocks clothing for men, women and children in limited quantities. Clothing is usually limited to staple items such as sweaters, suits, topcoats and baby needs.

Patent medicines and products for self-medication are not stocked, other than basic needs. You should bring your own medicines and lotions to stock your own medicine cabinet.

Articles, including luxury items, which are not carried in the store may be ordered in the Exchange's Special Order Department. Delivery of these articles may take from six to eight weeks but it's well worth the wait owing to the substantial savings that can often be made.

The Commissary Store is stocked with all staple items. Frozen vegetables and fruits are usually available and fresh vegetables and fruits to a lesser degree, depending upon plane and supply ship schedules. The selection of meats and dry provisions is very good. Frozen and reconstituted milk, cod liver oil and canned baby food are always stocked.

The Navy Exchange also operates three restaurants which offer complete meals or just a snack; a cobbler shop, beauty and barber shops, laundry and dry cleaning, tailor shop, flower shop, a gasoline station, an auto garage for minor repairs, and TV and washer repair shops.

In addition, grocery and merchandise stores are available in neighboring communities a few miles from the station. St. John's, a city of approximately 60,000, has corresponding shopping facilities. Prices are generally higher than for similar items in the United States, since practically all finished products are imported.

Currency—U. S. currency is the medium of exchange at the Naval Station in Argentia. Canadian currency is used in Newfoundland, although U. S. currency is normally accepted in cases of purchases off the leased area. The Naval Station disbursing officer maintains a supply of Canadian money which may be purchased at the current rate of exchange. Personal checks drawn on U. S. banks can be cashed at various facilities on the Naval Station.

QUIZ AWEIGH ANSWERS

Quiz Aweigh is on page 41

1. **(b)** *Demon.*
2. **(a)** 600 knots.
3. **(b)** 1040 feet.
4. **(c)** USS *Ranger.*
5. **(b)** Blimps—not gas bags either.
6. **(a)** 11 days — remember, this was above, not under the sea.

Although there is a branch of the Royal Bank of Canada on the station, a checking account in a U. S. bank is recommended for convenience in effecting purchases by mail from the States. The "S" allotment for all military personnel or the "Q" allotment for enlisted personnel may be used for maintaining bank accounts in the U. S. An account of this type is considered most desirable by the Navy Department as it may be used throughout one's naval career, regardless of duty station.

NOW HERE'S THIS

White Hat, Hard Hat

Anyone who's ever come up against the chief's exam should be able to appreciate this item from the Bulletin Board of *Propwash* — the station paper of NAS Whidbey Island, Oak Harbor, Wash. Only the man's name has been changed to protect the unadvanced.

"John Doe of Fasron 112 lost a blue working jacket, size 36, at the Ault Field Galley while he was participating in the E-7 examination. The pocket of the jacket contained a white hat stenciled with his name.

"The finder is requested to phone Doe at AF 5164 as he expects to be wearing the hat for another year."

Local Transportation — Adequate free bus transportation on the station is available. Buses operate daily throughout the base on a 20-minute schedule. Limited commercial service is also available to nearby communities.

Religious Services—Both Protestant and Roman Catholic services are conducted regularly at the naval station chapels. Jewish and other religious services not able to use the ministrations of Station Chaplains are conducted by their lay leaders.

Radio and TV—Argentia has its own Armed Forces Radio Service station VOUS. Reliable reception is possible from stations located in St. John's, Newfoundland and Sydney and Halifax, Nova Scotia. Short wave reception is good.

One St. John's television station can be received at Argentia with good results. Adequate reception was made possible two years ago with the construction of a new "satellite" transmitter.

Recreation — Trout and salmon fishing in the area is tops, so fishing gear is a must for those interested in this sport. Sleds and other toys for the children may be purchased more economically in the States, and ice skates can be used as the winters are unusually severe.

There are a motion picture theater, bowling alleys, gymnasium, indoor swimming pool, hobby shops for leathercraft, woodworking and photography; and an adequate lending library located aboard the station.

Recreation for the children includes: swimming and roller skating, Boy Scouts, Girl Scouts, Brownies and Cub Scouts, Saturday afternoon matinees and special children's parties.

For the adults there are six clubs on the station alone to provide entertainment and relaxation for the personnel stationed at Argentia. These clubs are: The 103 Club for minors under 21; the Bluejackets Club for enlisted personnel over 21; the Petty Officers Club for personnel over 21 who are in pay grade E-5 or higher; the CPO Club; the Officers Club; and the Newfoundland Civilian Club.

These clubs feature numerous entertaining events each week including regular movies at the Bluejackets, PO, CPO and Officers clubs. Dances are held frequently.

Information Centers for Navy Families Are a Big Hit, More Are Needed

Dependents' Information Centers at San Diego and Norfolk have enjoyed success and acclaim since their beginning more than four years ago. So much, in fact, that the Chief of Naval Personnel is encouraging other Navy commands to form similar activities.

BuPers Notice 1750 (6 May) observes that most naval stations already have some sort of system operating to supply needed aid and information to Navymen and their dependents. It urges consolidation and reorganization of existing facilities to conform more nearly to the San Diego and Norfolk models.

Ideally, it is felt, a Dependents' Information Center should be a part of, or closely allied with, the District Housing Office.

A logical location is just outside the main gate, or as close to it as possible, where it can provide a one-stop clearing house for all possible assistance and information available.

Some of the services that may be provided by Dependents' Information Centers are:

- Local housing information.
- Free notary service.
- Overseas living information and brochures.
- Issuance of completed Uniformed Service Identification and Privilege Cards to dependents, widows, Fleet Reservists, Naval Reservists and retired personnel, or information relative thereto.
- Information and assistance concerning transportation, travel and passports.
- Information concerning local uniformed services medical facilities and civilian medicare.
- Locator and directory service for area.
- State, city and base maps.
- Information concerning Navy Exchanges, commissaries and hobby shops.
- Income tax forms.
- Information on local schools, churches and recreational facilities.
- Information concerning pay, allowances, benefits, social security, insurance and voting.
- Liaison with Navy Relief, Red Cross, Navy Wives Clubs, Travelers Aid, and other federal and civil agencies in the area.
- Listings for baby sitters and domestic help.

Scholarships at Military Academy for Navy Juniors

Each year, Culver Military Academy at Culver, Indiana, awards 100 scholarships, worth a total of over $100,000, to deserving youths. A number of these grants are specifically reserved for the sons of armed forces personnel, and your youngster may qualify for this program.

The scholarships are awarded on a competitive basis, and any young man entering the ninth or tenth grades this coming fall is eligible to enter the competition.

Those interested in this opportunity are invited to contact Major General D. T. Spivey, USAF (Ret.), Superintendent, Culver Military Academy, Culver, Ind.

WAY BACK WHEN

Naval Railway Batteries

During the period from 6 Sep 1918 until the signing of the armistice, five United States naval batteries bombarded German bases and positions behind the lines in France. Each battery was composed of one 14-inch 50-caliber gun carried on a special railway mount attached to ammunition and auxiliary cars.

These guns, more powerful than any others in use at the front, played a prominent part in destroying railway and supply bases and, in general, hampered concentrations behind German lines.

In the planning stages, it was evident that the batteries would have to be completely mobile, and would also have to be entirely independent of logistics. This meant the guns themselves, the rolling repair shops, the cars for the machine shops, ammunition, cranes, and wireless outfits, as well as the barracks for personnel.

When word got out that these guns were being built and what they would be used for, more than 20,000 officers and men volunteered to be allowed to join the expedition.

The final complement read: one commanding officer, one aid (liaison), one medical officer, one supply and pay officer, one clerk, five battery officers, five fire-control officers, five gunners, five machinists. The enlisted breakdown came to five chief gunner's mates, 15 gunner's mates, five machinist's mates first class, five carpenter's mates first class, five blacksmiths, 11 cooks, 16 assistant cooks and mess attendants, 12 radio operators, one hospital steward, six hospital apprentices, six locomotive engineers, six firemen, six trainmen, 60 fire-control observers, 35 seamen (gun crew), 155 general ratings of the artificer branch for the construction crew.

For instruction the men were sent in groups to the Naval Gun Factory, Washington, D.C., and the proving grounds at Indian Head, Md., and Sandy Hook, N. J. They put the guns in place, loaded and fired them, disassembled them after proof, and became accustomed to the gunfire.

The group sailed for France in two drafts; the first arriving 10 June, the other 29 June. On 8 July, the naval battery was ready to proceed with the assembly work. The assembly of the first gun was begun on 26 July, and the first train was completed and ready to leave St. Nazaire on 11 August.

In all the assembly work the men were seriously handicapped. In some unexplainable manner, all blueprints were missing. But the resourcefulness of some of the men who made sketches in notebooks and brought them along made the job possible.

The first train left St. Nazaire on 18 August, traveling at the rate of six miles per hour. The American guns, constantly moved from point to point until the armistice was signed, were used in practically every famous battlefield of the war.

There was no let-up in the steady fire of the naval batteries at their respective targets until the last moment before the armistice went into effect. Battery No. 4, from its position at Charny, fired the last shot at 10.59 a.m., 11 November, into Longuyon. James A. Kaffka, Ship Fitter 1st Class, USN, was the man who closed the firing key.

In all, the five naval batteries fired a total of 782 rounds against the enemy.

This Is How to Get the Word Out Fast—Just Talk About It

The mess cook always has the latest scuttlebutt. But, besides the traditional hot scoop, the mess cook often has real information. For example, he knows the location aboard ship of certain classified material. He may be striking for a technical rate and thus would have access to secrets. He knows where the ship has been and, often, where it is going.

Then, as he goes up the promotion ladder, he learns more and more. A great deal of his information is about secret naval material. And, he learns to be very careful when he discusses classified matters. He knows that he can't tell even his one and only, as trustworthy as she is and as curious as she may be.

There are times, however, when our mess cook feels he can discuss a security matter and be perfectly safe. But is he?

Let's suppose you're a PO1. You know secrets about this Navy of yours and about your ship or station. Your family and friends know that you can't talk about a lot of your work. You're smart and you know how to wangle out of any attempt to "pump" you for your information. In short, you go by the regs and keeps your secrets to yourself.

There may come a time, when you're ashore. You're bringing a shipmate home to meet your wife. In your auto, you discuss classified material—talking shop. Any chance of that being overheard? You're right—it can be.

Let's take another example. You're on leave. You and your wife are taking a trip. You go to a hotel. While you're there you run into a former shipmate who is now assigned to a different ship. Your wife takes off for a shopping tour and you and your shipmate sit around and talk over ports you have visited, people you know, sports—and then, as sometimes happens, start talking about your work. It's safe, so you discuss the latest gizmo and the improved statisfrat that the Navy scientists have whipped up to improve the Mark VI Mod V Frammis.

Can anyone hear you? You guessed it—they can.

How? With electronic devices. Little listening gadgets, that is. They are small, powerful and sneaky. They can be installed in telephones, furniture, behind draperies, under rugs, within electrical outlets, in automobiles. They can be straight pick-up types, or even radio transmitters. That's not all. Take a look at some of these. The training officer who handles security training in the Bureau gave us a list of *some* of them.

- Highly sensitive microphones and miniaturized radio transmitters that can be planted in small places with little or no trace of tampering and which can be monitored from remote locations without use of wires. Transmitters as small as a pack of cigarettes can pick up a conversation, beam it to a portable receiver and have it recorded a quarter of a mile away.
- Parabolic microphone, which can pick up a conversation at distances up to 200 or 300 yards.
- The telephone, when modified in one of many different ways, will serve as a "hot" microphone even when the handpiece is properly placed in its cradle. A similar adjustment may be made to any intercom system, radio, phonograph or TV. And it's been done too.
- Interception of telephone conversations is relatively easy by a "tap" even at distances many miles from the tapped instrument. Then there is the neat trick of tapping a telephone by induction. This enables a listener to pick up a two-way conversation without even touching the telephone wires.
- Tape recorders are made so small they may be concealed in a briefcase, shopping bag, delivery box or similar article. Some models are equipped to record automatically and unattended under battery power for many hours.
- A microphone disguised as a wrist watch or hearing aid, or concealed under a necktie or coat lapel, can be hooked up to a recorder carried in an inside pocket or shoulder holster.

Did you ever run into this situation? You're in a foreign port. Suddenly your ship is ordered to proceed to another foreign port. You get underway, proceed at standard speed, moor. The first liberty boat hits the landing. You go ashore, and—there's a sign, welcoming your ship. You figure that one out.

You may be a communications officer or a sonarman. You may even be the number one mess cook. Whoever you are, you have information. You are ready to guard your ship and your country with your life. You should guard your classified information with the same toughness, the same skill.

It's almost a matter of "Don't talk to anybody about anything any place." Or, to be more official —and safe—don't discuss classified information in unauthorized areas or with unauthorized persons.

Two More Correspondence Courses Join Navy Roster

Two new Enlisted Correspondence Courses are now available, and one course has been discontinued.

Enlisted Correspondence Courses for active duty personnel will be administered (with certain exceptions) by your local command instead of by the Correspondence Course Center. Your division officer will advise you whether the course for which you have applied is suitable to your rate and to your training program. He will forward your application (NavPers 231) to the Center, which will supply the course materials to your command.

Personnel on inactive duty will have courses handled by the Center.

Title	*NavPers No.*	*Assignments*
Photographer's Mate 3	91492	11
Aviation Boatswain's Mate 3 and 2, Vol. 1	91636	6

The discontinued course is entitled *Aviation Boatswain's Mate*, Vol. 1, (NavPers 91654-1A).

For Navy Legal Specialists —Here's Your Chance To Break into Print

Navy law specialists who like to write may now win cash—$500—for their efforts.

An award for that amount will be made to the Navy law specialist who has written and published the best article on Navy Law and Sea Power during the 1960 Fiscal Year.

The Navy Lawyer Award has been made possible for the next two years by an anonymous donor. It will be administered by a committee representing the Navy League and the office of the Judge Advocate General.

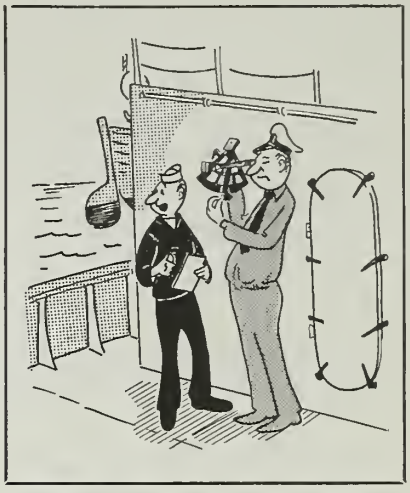
Rules are:

- Competition is open to any Navy law specialist, Regular or Reserve, on active duty, who has not previously received this award.
- To be eligible for submission an article must relate to Navy Law and Sea Power, have been written by an eligible Navy law specialist, and have been published during the fiscal year ending 30 June 1960 in a periodical acceptable to the committee as having substantial circulation.
- Entry of an article may be made by the author or by any person desiring to nominate an article with the written consent of the author. Six copies of the published article together with the written consent of the publisher for its entry, must be submitted to the Navy League at any time after 1 Jul 1959 and before 15 Jul 1960.
- No requirement is made as to length, form or copyright. Any reprinting, extensive quotation from, or digest of any submitted article, award winning or otherwise, will be entirely subject to the consent of the publisher or copyright owner.

Selection from the submitted articles as the "best of the year" will be made by the judges on the basis of over-all reader interest, literary excellence, professional merit, and contribution to the Navy. Decision by the judges will be final.

The award will be presented with appropriate ceremony at a time and place to be announced by sponsors.

B. E. Lodge, LT, USN



"Sir, I-I think you are shooting the masthead light."

Summer Training Keeps Midshipmen Busy

More than 800 midshipmen are winding up summer cruises which included training ashore and in ships operating in the waters of the Atlantic, Pacific, Mediterranean and Great Lakes. Almost 6000 Naval Reserve Officer Training Corps midshipmen from 53 colleges and universities and 2600 midshipmen from the Naval Academy are participating.

About 160 NROTC and 960 Academy men—among them the entire second-year class from Annapolis—were scheduled to take part in the opening ceremonies of the St. Lawrence Seaway, and visit various Great Lake ports.

Another 130 NROTC midshipmen joined 470 from the Academy for Med cruises in Sixth Fleet ships.

At least 240 NROTC and 60 Annapolis midshipmen were flown to the Seventh Fleet in the western Pacific for three months' training there. An additional 1800 NROTC midshipmen were trained in First Fleet ships in the eastern Pacific.

In the western Atlantic about 150 midshipmen were embarked in Second Fleet ships, and about 1200 trained with antisubmarine carrier groups of the Atlantic Fleet Antisubmarine Defense Force.

This year, for the first time, some midshipmen were assigned to submarines for the entire summer training period. More than 100 of them were on board subs operating from New London, Norfolk, Key West, San Diego and Pearl Harbor.

Some 1400 NROTC midshipmen received aviation training in two "shifts" at Corpus Christi, Tex. The first shift, made up of NROTC students from western colleges, moved to Coronado, Calif., for amphibious training after their session at Corpus Christi. The second, composed of NROTC men from eastern colleges, were instructed in amphibious operations at Little Creek, Va., and then moved to Corpus for air training.

Another 800 Naval Academy men received amphibious training at Little Creek, and aviation training at Jacksonville and Pensacola, Fla.

Note to Reservists: Here's How to Get the News

Want to keep up with the latest developments in the Naval Reserve? Reservists serving on full-time active duty—and other interested naval personnel—can do so easily by reading *The Naval Reservist*.

This eight-page periodical is distributed each month on the same basis as ALL HANDS—that is, one copy for each 10 persons on board. (Individual copies cannot be mailed to Reservists on active duty.) While these copies are intended primarily for use by Reservists on board, they should be made available to all naval personnel.

If you're a Reservist on active duty, make sure you read the *Reservist* regularly; then pass your copy along to your fellow Reservists and other interested Navymen. The *Reservist* should be available in your personnel office and at ship and station libraries.

Reservists on inactive duty may receive individual copies of the publication. Those attached to drilling units—Selected Reserve (pay) and Specialist (nonpay)—receive copies via their COs. Inactive duty Reservists who are not members of drilling units receive copies by mail from the commandant of their naval district. However, Reservists on the Retired or Inactive Status Lists must notify their commandant if they wish to receive the publication.

If an 'X' Is After Your Rate, You're Marked for August Exams

NEXT MONTH is exam time again. Enlisted pesonnel in every pay grade except E-6 will compete for advancements in 124 different areas.

Since CPO exams are administered only in February, POs will be the only persons who will not be confronted with the examination booklets in August.

Many changes in the administration and procedures in governing the advancement in rating system will be used for the first time during next month's exams. These changes are part of a long-range effort to improve and speed up the Navy's examining system for advancements in rating.

Briefly, these changes in procedure include:

• BuPers Notice 1418 of 9 Apr 1959. Subject—Temporary changes to administrative procedures for submission of forms and reports during the August 1959 examinations.

This notice announced plans for temporary change in the method of submitting the Report of Examination for Advancement or Change in Rating (NavPers 624, revised 5-58). One of the more important aspects of this change includes the use of a punched card answer sheet (NavPers 624-1 and -2). See page 20 for full details and illustrations.

These punched answer cards will be used instead of the present mark-sense answer sheets on the reverse side of the NavPers 624. They will permit more efficient processing of

RATING	E-4	E-5	E-6	E-8	E-9
AB		X	X	X	X
ABG	X				
ABU	X				
AC			X	X	X
ACR	X	X			
ACT	X	X			
ACW	X	X			
AD		X	X	X	X
ADJ	X				
ADR	X				
AE		X	X	X	X
AEI	X				
AEM	X				
AG	X	X	X	X	X
AK	X	X	X	X	X
AM			X	X	X
AME	X	X			
AMH	X	X			
AMS	X	X			
AO	X	X	X	X	X
AQ		X	X	X	X
AQB	X				
AQF	X				
AT		X	X	X	X
ATN	X				
ATR	X				
ATS	X				
BM	X	X	X	X	X
BR			X	X	X
BT	X	X	X	X	X
BU			X	X	X
BUH	X	X			
BUL	X	X			
BUR	X	X			
CE			X	X	X
CEP	X	X			
CES	X	X			
CET	X	X			
CEW	X	X			
CM			X	X	X
CMA	X	X			
CMH	X	X			
CS	X	X	X	X	X
DC	X	X	X	X	X
DK	X	X	X	X	X
DM	X	X	X	X	X
DTG	X	X	X	X	X
DTP	X	X	X	X	X
DTR		X	X	X	X
EM	X	X	X	X	X
EN	X	X	X	X	X
EO			X	X	X
EOH	X	X			
EON	X	X			
ET		X	X	X	X
ETN	X				
ETR	X				
ETS	X				
FT		X	X	X	X
FTA	X				
FTE	X				
FTG	X				
FTL	X				
FTM	X				
FTU	X				
GF	X	X	X	X	X
GM	X	X	X	X	X
GS	X	X	X	X	X
HM	X	X	X	X	X
IC	X	X	X	X	X
IM	X	X	X	X	X
JO	X	X	X	X	X
LI	X	X	X	X	X
MA	X	X	X	X	X
ML	X	X	X	X	X
MM	X	X	X	X	X
MN	X	X	X	X	X
MR	X	X	X	X	X
MU	X	X	X	X	X
NW	X	X	X	X	X
CM	X	X	X	X	X
PH		X	X	X	X
PHA	X				
PHG	X				
PM	X	X	X	X	X
PN	X	X	X	X	X
PR	X	X	X	X	X
PT	X	X	X	X	X
QM	X	X	X	X	X
RD	X	X	X	X	X
RM	X	X	X	X	X
SD	X	X	X	X	X
SF			X	X	X
SFM	X	X			
SFP	X	X			
SH			X	X	X
SHB	X	X			
SHC	X	X			
SHL	X	X			
SHS	X	X			
SHT	X	X			
SK	X	X	X	X	X
SM	X	X	X	X	X
SO			X	X	X
SOA	X	X			
SOG	X	X			
SOS	X	X			
SOO	X				
SV	X	X	X	X	X
SW			X	X	X
SWE	X	X			
SWF	X	X			
TD		X	X	X	X
TDI	X				
TDR	X				
TE(RM)		X	X		
TE(YN)			X		
TM	X	X	X	X	X
UT			X	X	X
UTA	X	X			
UTB	X	X			
UTP	X	X			
UTW	X	X			
YN	X	X	X	X	X

Jot These Dates Down In Your Little Black Book

Here's the schedule of the service-wide examinations for advancement in rating to pay grade E-4, E-5, E6, E-8 and E-9 to be conducted in August:

• Pay Grades E-8/E-9 (Senior and Master Chief Petty Officers)—Tuesday, 4 Aug 1959.

• Pay Grade E4 (Petty Officer, Third Class)—Thursday, 6 Aug 1959.

• Pay Grade E-5 (Petty Officer, Second Class)—Tuesday, 11 Aug 1959.

• Pay Grade E-6 (Petty Officer, First Class)—Thursday, 13 Aug 1959.

examinations at the Naval Examining Center with a consequent reduction in the time required to announce the results of the examinations. The new answer cards and full instructions for their use will accompany the examination booklets.

• BuPers Inst. 1414.3B. Subject —changes in minimum service requirements for eligibility for advancement to pay grades E-3 and E-4. *This instruction has been canceled.*

Time in rate requirements as specified in *BuPers Manual,* Article C-7204, will be effective for the August 1959 examining period (see accompanying box).

• BuPers Inst. 1440.15, Subject —consolidation of Printer (PI) and Lithographer rating into one rating, LI. This directive has been *canceled,* as all printers have now been changed to the rating of lithographer.

• BuPers Inst. 1440.22, Subject— procedure for establishment of the Nuclear Weaponsman (NW) rating. This instruction has been *canceled,* since satisfactory input into the NW rating has been accomplished. Future changes to NW will be in accordance with BuPers Inst. 1440.5B and/or 140.18B.

• BuPers Notice 1418 of 8 Feb 1958, which provided for initial input of personnel into Photographic Intelligenceman (PT) rating has been *canceled.*

Future changes to the PT rating will be in accordance with BuPers Inst. 1440.5B. A forthcoming change to BuPers Inst. 1430.7C (advancement in rating of enlisted personnel) will specify successful completion of the Photo Reader Course at a Fleet air intelligence training center as a prerequisite for advancement to PT3. Graduation from that course, or the Photographic Interpretation School, is a requirement for change to the PT rating.

D. J. Majchrzak DN, USN

"I'm rehearsing for the day I make Chief."

•BuPers Notice 1440 of 20 Mar 1959 establishes service rates within the Sonarman rating at the lower pay grade levels. These service rates are: SOG (Sonarman, Surface), SOS (Sonarman, Submarine), SOA (Sonarman, Airborne), and SOO (Sonarman, Oceanographer)

Only seamen (SN) are eligible to compete for advancement to SOG3, SOS3, and SOO3. Both seamen and airmen (AN), however, may compete for SOA3.

On the preceding page is listed exams to be given in August for all pay grades in the general, service and selective emergency service ratings, except E-8 and E-9. The senior and master chief petty officer exams will be combined into one exam.

Check the Directives Which Concern You Before Exams

Here's a list of directives which affect some of the individual ratings for which examinations are scheduled during the first two weeks of August:

• BuPers Inst. 1223.1: Selective Emergency Service Rate program (through change five).

• BuPers Inst. 1418.1: CGA Control Operator certificate requirements for personnel in Air Controlman (AC) rating (through change one).

• BuPers Notice 1440 of 20 Mar 1959: Changes in the Sonarman (SO) rating resulting from modification of the enlisted rating structure.

• BuPers Inst. 1440.5B: Changes in rate and rating (through change one).

• BuPers Inst. 1440.20: Change in rating of personnel in the Teleman (TE) rating to Radioman (RM) or Yeoman (YN).

• BuPers Inst. 1440.10A: Consolidation of the Aviation Electronicsman (AL) and Aviation Electronics Technician (AT) into one rating, AT.

DIRECTIVES IN BRIEF

This listing is intended to serve only for general information and as an index of current Alnavs and NavActs as well as current BuPers Instructions, BuPers Notices, and SecNav Instructions that apply to most ships and stations. Many instructions and notices are not of general interest and hence will not be carried in this section. Since BuPers Notices are arranged according to their group number and have no consecutive number within the group, their date of issue is included also for identification purposes. Personnel interested in specific directives should consult Alnavs, NavActs, Instructions and Notices for complete details before taking action.

Alnavs apply to all Navy and Marine Corps commands; NavActs apply to all Navy commands; BuPers Instructions and Notices apply to all ships and stations.

Instructions

No. 1120.30—Prescribes the policy and procedures whereby eligible USN officers may request transfer to the Army, Air Force or Marine Corps.

No. 1560.12A — Recommends study materials for those planning a program of study for the examination to be administered to those nominated for commissioned status.

No. 1210.9 — Establishes procedures for qualifying officers for command of destroyers.

No. 1750.6A — Provides current administrative regulations and procedures for immediate payment of death gratuity.

No. 5512.2A — Prescribes the identification cards to be issued to USN and USNR members, and introduces a standard application form NavPers 2721 "Application for Armed Forces Identification Card DD Form 2N."

No. 5521.2C—Revises and clarifies administrative requirements and procedures concerning security clearance eligibility of naval personnel.

Notices

No. 1430 (7 April)—Listed those who may be advanced to chief petty officer, acting appointment.

No. 1120 (13 April)—Announced the selection of applicants for training leading to a permanent commission as ensign, USN, for temporary appointment as ensign (LDOT) and warrant officer, W-1.

No. 1531 (14 April)—Requested nomination of candidates for assignment to the U. S. Naval Preparatory School, Bainbridge, Md.

No. 1120 (20 April)—Announced cancellation of BuPers Inst. 1120. 14A, which is concerned with the appointment of certain Naval Reserve aviators to commissioned grade in the line of the Regular Navy.

No. 4600 (20 April)—Called attention to the limitation of reimbursement for circuitous travel performed from overseas areas to the United States.

No. 1020 (27 April)—Announced implementation of certain recently approved changes to *Navy Uniform Regulations.*

No. 1418 (1 May)—Announced the schedule for service-wide examinations for enlisted personnel to be held in August.

No. 1750 (6 May)—Furnished information on the successful operation of Dependents Information Centers in the Norfolk and San Diego areas, and encouraged, where possible, reorganization and consolidation of all services furnished dependents at naval stations.

No. 1510 (7 May)—Announced the selection of personnel for the 1959 Navy Enlisted Advanced School Program and the Navy Enlisted Scientific Education Program.

No. 1520 (11 May)—Announced the selection of officers for the submarine school class of 6 July at the Submarine School, New London, and also announced those eligible to apply for the January 1960 class.

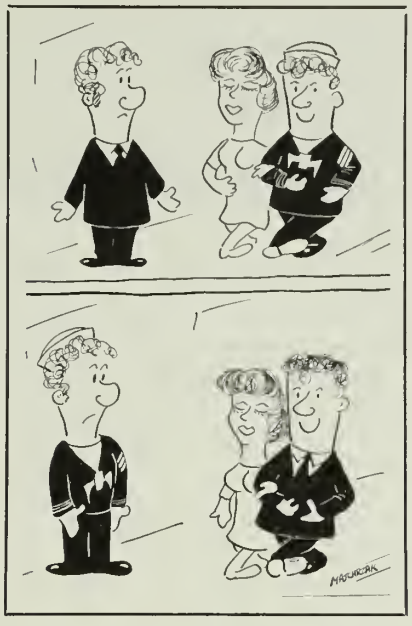
No. 1760 (11 May)—Announced the distribution of a revised pamphlet "Going Back to Civilian Life" and the interim distribution of "Federal Benefits" and "Facts You Should Know Upon Relief From Active Duty or Discharge."

No. 1306 (15 May)—Established the eligibility of personnel for Seavey Segment 3-59 by promulgating sea-tour commencement cut-off dates.

No. 5510 (18 May)—Directed the attention of all commands to the necessity for compliance with security procedures and requirements.

No. 1221 (19 May) — Provided specific identification of requirements and of enlisted personnel trained in the Fleet Ballistic Missile Weapon System.

No. 1426 (20 May)—Emphasized the responsibility of commanding officers to order eligible lieutenants (junior grade) to obtain promotion physical examinations.



No. 1430 (20 May)—Advised that certain personnel will be advanced to senior and master CPO.

No. 1813 (20 May)—Modified provisions of the *BuPers Manual* to insure that no change is made in rating upon transfer to the Fleet Reserve.

Navy Advances 1144 Men to Senior and Master Chief As Result of February Exams

Eleven hundred forty-four Navymen have added one or two stars above their chevrons as a result of last February's E-8 and E-9 examinations.

They were selected for the top two enlisted pay grades by an examining board which convened in April to consider all E-7 and E-8 candidates who participated in the February tests.

Of the 1144 selections, 993 were advanced to senior chief (E-8), and 151 were upped to master chief (E-9.) Nearly 50 per cent of the E-9s—71 of them, to be exact—were senior chiefs who took advantage of the exam to move into the top spot.

As in the initial grade hikes last fall, aviation machinist's mates, with 10 E-9s and 67 E-8s, led all other rates in the total number of those enlisted men selected.

Aviation ratings, as a group, once again led with 38 E-9s and 249 E-8s selected, but they were closely pressed by the Engineering & Hull, and Administrative & Clerical branches.

Advancements, broken down by rating, were:

Rating	E-8	E-9
Aviation Boatswain's Mate (AB)	10	2
Air Controlman (AC)	11	2
Aviation Machinist's Mate (AD)	67	10
Aviation Electrician's Mate (AE)	23	4
Aerographer's Mate (AG)	5	1
Aviation Storekeeper (AK)	10	2
Aviation Structural Mechanic (AM)	39	6
Aviation Ordnanceman (AO)	16	3
Aviation Fire Control Technician (AQ)	5	—

Service Requirements for Advancement in Rate

Enlisted personnel are eligible for advancement in rate when the following service requirements—as specified in Article C-7204, *BuPers Manual*—have been met:

E-1 to E-2	No specified time for advancement, may be effected upon completion of recruit training; otherwise four months' naval service.
E-2 to E-3	Six months in pay grade E-2.
E-3 to E-4	Six months in pay grade E-3.
E-4 to E-5	12 months in pay grade E-4.
E-5 to E-6	24 months in pay grade E-5.
E-6 to E-7 (Acting)	36 months in pay grade E-6.
E-7 to E-8*	48 months in pay grade E-7, and minimum total service of 11 years, eight of which must be enlisted service.
E-8 to E-9	24 months in pay grade E-8, and minimum total service of 13 years, 10 of which must be enlisted service.

*Must be serving as Chief Petty Officer, Permanent Appointment. Regulations pertaining to appointments to CPO permanent appointment are contained in BuPers Manual, Article C-7209.

Aviation Electronics Technician (AT)	43	6
Boatswain's Mate (BM)	47	6
Boilermaker (B8)	1	1
Boilerman (BT)	37	6
Builder (BU)	4	1
Construction Mechanic (CM)	3	—
Commissaryman (CS)	35	6
Communications Technician (CT)	18	3
Damage Controlman (DC)	12	2
Disbursing Clerk (DK)	8	1
Draftsman (DM)	1	—
Dental Technician (DT)	5	1
Electrician's Mate (EM)	39	5
Engineman (EN)	43	7
Equipment Operator (EO)	4	1
Electronics Technician (ET)	31	5
Fire Control Technician (FT)	17	3
Aviation Missileman (GF)	2	—
Gunner's Mate (GM)	27	5
Guided Missileman (GS)	3	—
Hospital Corpsman (HM)	49	8
I. C. Electrician (IC)	13	2
Instrumentman (IM)	2	—
Journalist (JO)	1	—
Lithographer (LI)	1	—
Machine Accountant (MA)	3	—
Machinist's Mate (MM)	51	7
Mineman (MN)	2	—
Machinery Repairman (MR)	7	1
Musician (MI)	6	1
Nuclear Weaponsman (NW)	1	—
Opticalman (OM)	1	—
Photographer's Mate (PH)	7	1
Personnel Man (PN)	16	1
Parachute Rigger (PR)	6	1
Photographic Intelligenceman (PT)	1	—
Quartermaster (QM)	16	3
Radarman (RD)	19	3
Radioman (RM)	49	7
Steward (SD)	16	2
Shipfitter (SF)	25	4
Ship's Serviceman (SH)	11	2
Storekeeper (SK)	25	4
Signalman (SM)	15	2
Sonarman (SO)	15	2
Steel Worker (SW)	2	—
Torpedoman's Mate (TM)	16	2
Tradesman (TD)	4	—
Utilities Man (UT)	2	—
Yeoman (YN)	44	8

WHAT'S IN A NAME

Midway

This month, Midway, a little place which has loomed large in naval history, celebrates its centennial. Appropriately—for Midway's importance in the nation's defense keeps right up with the times—this month will also mark the completion of the first year of Airborne Early Warning flights from this strategic outpost.

The pear-shaped atoll, containing two main islands—Sand and Eastern—is only about six miles in diameter. Its discovery is credited to Captain N. C. Brooks, of the Hawaiian bark *Gambia*, who claimed it for the United States on 5 Jul 1859. He called the place Middlebrook Islands.

In May 1867 the North Pacific Squadron was ordered to take over Midway by Secretary of the Navy Gideon Welles, and that September CAPT William Reynolds, USN, of USS *Lackawanna*, formally took possession in the name of the United States. Thus, the Midway Islands became the first beyond our shores to be annexed by the U. S.

In 1869 Congress appropriated $50,000 to dredge a channel into the lagoon, so that Midway could be used as a coaling station by ships trading with the Orient. The operation, directed by LCDR Montgomery Sicard in USS *Saginaw*, had to be abandoned after seven months, and *Saginaw* was wrecked on Kure Island on the return voyage. However, her crew was saved by a handful of volunteers who set out in the gig to travel some 1500 miles to Hawaii to seek help.

About 1900, poachers were found on Midway, killing off the island birds for their feathers. The foreign squatters became so numerous that President Theodore Roosevelt was concerned that others might claim the islands. So, on 20 Jan 1903, he placed Midway under the jurisdiction and control of the Navy Department. On 3 June of that year the poachers were ordered to leave.

It was also in 1903 that Midway became a relay station on the Pacific telegraph cable linking Honolulu and the Philippines.

By 4 Jul 1904, when President Roosevelt sent the first "round the world" cable message, the atoll was garrisoned by 20 Marines, and its population was about 100, including contractors' employees and cable-station personnel. Midway began to take on a new look as soil for gardens, and farm fowl and cattle were imported.

In 1908 the Marines were withdrawn from the atoll. Until 1935, when Midway became a base for trans-Pacific commercial seaplanes, most Americans more or less forgot about the place. That same year, the Navy held Fleet maneuvers in the area.

When World War II began, Midway was one of the targets the Japanese hit on 7 Dec 1941. The islands were shelled for 23 minutes by a Japanese naval force.

Marine First Lieutenant George H. Cannon was commanding a battery of the Sixth Defense Battalion on Sand Island when he was wounded by the enemy shellfire. However, he refused to be evacuated from his post until after his men, wounded by the same shell, were carried to safety, and he directed the reorganization of his command post until he was forcibly removed. Because of his utter disregard for his own condition he died from loss of blood. Posthumously, he became the first Marine to receive the Medal of Honor in World War II.

In June 1942, the Battle of Midway—one of the most decisive in naval history—was fought in the area. It was the turning point of the Pacific war, for it cost the Japanese four aircraft carriers and a high percentage of their most highly trained and battle-experienced carrier pilots. Our losses—one aircraft carrier, one destroyer and 150 aircraft—attest to the ferocity with which the battle was fought.

Now fighting to hold the peace, Midway is actively engaged in around-the-clock Pacific Barrier flights. It is also an important Fleet refueling station.

—George H. Tyler, BM2, USN.

Sea Tour Cut-Off Dates Announced for Navymen In Seavey Segment Three

Orders to shore duty under Seavey Segment Three (1959) will start going to men in the aviation and medical ratings beginning 1 Oct 1959.

BuPers Notice 1306 of 15 May 1959 established sea duty commencement cut-off dates for those ratings, and directed commanding officers to forward completed rotation data cards to appropriate PAMI by 15 July 1959.

While unforeseen allowanee changes or other factors might make it necessary to hold certain personnel at sea beyond the Seavey year in some cases, they will still be ordered ashore before anyone in the next Segment. If being so held leaves a man with insufficient obligated service to be ordered to shore duty, he'll get an opportunity to extend or reenlist.

Sea-tour commencement cut-off

dates for Seavey Segment 3-59:

Rate	Date
ADC, 1, 2, 3, AN	Dec 57
ATC, 1, 2, 3, AN	Sep 57
ALC, 1, 2, 3, AN	Sep 57
AOC	Sep 57
AO1, 2, 3, AN	Dec 56
GFC, 1, 2, 3, AN	Jun 57
PRC, 1	Dec 57
PR2, 3, AN	Sep 57
AG1, 2, 3, AN	Dec 57
AKC, 1, 2, 3, AN	Sep 57
PHC, 1, 2, 3, AN	Sep 57
PTC	Dec 57
PT1	Sep 57
AQC, 1, 2, 3, AN	Jun 57
ACC, 1, 2, 3, AN	Dec 57
ABC	Dec 57
AB1, 1, 2, 3, AN	Mar 57
AEC, 1, 2, 3, AN	Sep 57
AMC, 1, 2, 3, AN	Dec 57
PT2	Jun 57
PT3, AN	Mar 57
HMC ,1	Jun 57
HM2, 3, HN	Dec 57
DTC, 1, 2, 3, DN	Dec 57

Attack Transport Earns 'Red E' for Noble Effort

The attack transport USS *Noble* (APA 218) has won PHIBPAC's Assault Boat Insigne and Engineering "Red E" for the third straight year. The APA now wears two 'hashmarks' under its awards.

In 1957, *Noble* became the first ship in the Pacific Fleet to win the Assault Boat Insigne. This award of crossed anchors and an arrowhead indicates outstanding performance.

Tuning In On Summertime Network of AFRS New York

There have been some changes made in the new summer shortwave schedule of the Armed Forces Radio Service (New York).

In addition to the hourly news coverage, it will air at least as many (154) baseball games as last year.

"Panorama," which was originally a week-end service, will also be scheduled for Tuesday, Wednesday and Thursday, as well. This is a short wave service offering news, special events and feature items, special armed forces news, interviews with personalities in sports, movies and radio-TV.

The Armed Forces Radio Service originates both in New York (Atlantic service) and Los Angeles (Pacific service). Live and recorded programs are broadcast over ten 50,000-watt transmitters on different frequencies and beamed to the 167 Armed Forces Radio Stations in various parts of the world for rebroadcast on standard broadcast frequencies and to anyone who owns a shortwave set.

Summer Shortwave Schedule—AFRS New York

GMT	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1430	DATELINE NEW YORK	DATELINE NEW YORK	DATELINE NEW YORK	DATELINE NEW YORK	DATELINE NEW YORK	DATELINE NEW YORK	DATELINE NEW YORK
1500	MARCH OF EVENTS	MARCH OF EVENTS	MARCH OF EVENTS	MARCH OF EVENTS	MARCH OF EVENTS	MARCH OF EVENTS	MARCH OF EVENTS
1515	SPORTS PAGE	SPORTS PAGE	SPORTS PAGE	SPORTS PAGE	SPORTS PAGE	SPORTS PAGE	SPORTS PAGE
1530	PANORAMA	THE JACK PAAR SHOW	THE JACK PAAR SHOW	THE JACK PAAR SHOW	THE JACK PAAR SHOW	THE JACK PAAR SHOW	PANORAMA
1600		NEWS-05	NEWS-05	NEWS-05	NEWS-05	NEWS-05	
		MEET THE PRESS	GUNSMOKE	SUSPENSE	WHAT'S MY LINE	HAVE GUN, WILL TRAVEL	
1630		JOHNNY DOLLAR	RAY HEATHERTON	RAY HEATHERTON	RAY HEATHERTON	PARADE OF HITS	
1700	NEWS-05	NEWS-15	NEWS-15	NEWS-15	NEWS-15	NEWS-15	NEWS-05
1715		DICK CLARK BANDSTAND	PANORAMA	PANORAMA	PANORAMA	ALL STAR GOLF	
1800		NEWS-05	NEWS-05	NEWS-05	NEWS-05	NEWS-05	
1805		ARTHUR GODFREY	PANORAMA	PANORAMA	PANORAMA	NAME THAT TUNE	
1830		FACE THE NATION				AMERICAN ADVENTURE	
1900	NEWS-05	NEWS-15	NEWS-15	NEWS-15	NEWS-15	NEWS-15	NEWS-05
1915		WORLD OF SPORTS	WORLD OF SPORTS	WORLD OF SPORTS	WORLD OF SPORTS	WORLD OF SPORTS	
1930		MITCH MILLER	PANORAMA	PANORAMA	PANORAMA	FAMILY THEATRE	
2000		NEWS-05	NEWS-05	NEWS-05	NEWS-05	NEWS-05	
2005		PARALLEL	PANORAMA	PANORAMA	PANORAMA	CAPITOL CLOAKROOM	
2030		RONI LANORY SHOW				FORTY SQUAREO	
2100	NEWS-05	NEWS-15	NEWS-15	NEWS-15	NEWS-15	NEWS-15	NEWS-05
2115	PANORAMA	AMERICA'S BUSINESS					PANORAMA
2120		FEATURE PAGE	FEATURE PAGE	FEATURE PAGE	FEATURE PAGE	FEATURE PAGE	
2130		COUNTRY JAMBOREE	COUNTRY JAMBOREE	PRESIDENT'S NEWS CONFERENCE	COUNTRY JAMBOREE	COUNTRY JAMBOREE	
2200	FINAL EDITION	FINAL EDITION	FINAL EDITION	FINAL EDITION	FINAL EDITION	FINAL EDITION	FINAL EDITION
2215	ARMED FORCES DIGEST	HOUSE PARTY	HOUSE PARTY	HOUSE PARTY	HOUSE PARTY	HOUSE PARTY	STORYTELLER
2230	SPORTS TODAY	SPORTS TODAY	SPORTS TODAY	SPORTS TODAY	SPORTS TODAY	SPORTS TODAY	SPORTS TODAY
2244	SIGN OFF	SIGN OFF	SIGN OFF	SIGN OFF	SIGN OFF	SIGN OFF	SIGN OFF

Transmitter	Time (GMT) Frequency	Wave Length	Bearing	Beam Area
WOSI-1	1430-2245 21.65 Mcgs	13.91 M	55°	Europe
WRUL-2	1730-2245-15.38-Mcgs	19.51 M	3°	Greenland
WRUL-3	1730-2245-17.71-Mcgs	17.86 M	160°	Caribbean
WBOU-5	1430-2245 17.78 Mcgs	16.87 M	42°	Europe
WBOU-6	1730-2245-15.27-Mcgs	19.60 M	42°	Europe
MUNICH	1430-2245 15.385 Mcgs	19.52 M	115°	Mid. East

Report on Unemployment Compensation Applicable to Ex-Servicemen

You're nearing "nineteen and six" and the day that you will retire is near.

The word "retire" makes you feel a little nostalgic, but still it sounds good. However, most likely you and a majority of the other career Navymen going out on 20 won't retire to a life of idleness. You now begin your second career.

To readjust yourself to this new way of life and your second career requires both time and money. Not everyone is fortunate enough to get out of the Navy and immediately find a job if he needs the extra income to take care of his dependents.

Even with retirement/retainer pay a man could find it tough sledding during the transition period, especially with a sizable family to support.

That's one of the reasons Congress passed the "Ex-servicemen's Unemployment Compensation Act of 1958" (Public Law 85-848). The law provides unemployment compensation for ex-servicemen who are separated or retired from active service, regardless of their rank or rate, while they seek employment.

As an ex-Navyman, you may receive these unemployment compensation benefits if:

- You have had 90 or more continuous days of active service in the armed forces (or less than 90 days if you were discharged or released because of a service-incurred disability or injury).
- Your service began after 31 Jan 1955, or, if your active service was begun on or before 31 Jan 1955 and was terminated after 27 Oct 1958.
- You have been discharged or released under conditions other than dishonorable, you have not received a bad conduct discharge, or, if an officer, you have not resigned for the good of the service.

To qualify for this unemployment insurance, you must visit the nearest local state employment service office of the state employment security agency to register for work and file a claim for unemployment benefits after you are separated from the Navy. If there is no office in your locality, you may ask the local postmaster for the address of the nearest office.

You will be paid these benefits, if eligible, by a state employment security agency under the provisions of the state unemployment insurance law (the U. S. government reimburses the state). However, your benefits will not start until after:

- The period covered by lump-sum terminal leave payments (the number of days after discharge or release equal to the number of days of unused leave which is compensated).
- The period covered by mustering-out payments (90 days after discharge or release if you get $300, 60 days if you get $200, and 30 days if you get $100).
- Any period for which you are receiving an education and training allowance under the Veterans' Readjustment Assistance Act of 1952; a subsistence allowance under Part VII or VIII of the Veterans Regulation numbered 1 (a), as amended; or an education assistance allowance under the War Orphans' Educational Assistance Act of 1956.
- The applicable waiting period, if any, provided in the law of the

Shipboard Chuck Wagon Goes Over Big

A shipyard overhaul period is usually a hectic time at best. But when it includes extensive repairs to the ship's galley, the morale of the crew can drop.

Usually when this happens, the crew eats in the shipyard mess hall. All too often the mess hall is located a long distance from the ship's berth. Most times, the men must ride a bus to eat. Should they miss the bus, they are faced with the prospect of a long hike, a hurried meal, and another long hike back to the ship. The alternative is to miss the meal.

Few crews go for this and—regardless of what they say in their own mess hall—there are few sailors who don't prefer to eat food prepared aboard their own ship.

The PHIBPAC flagship USS *Eldorado* (AGC 11) was faced with this messing problem during a yard overhaul. However, hers was an even bigger problem than usual. Not only was the crew's galley going to be out of service, but the dishwashing machinery and refrigerators were also scheduled for major repairs.

The ship's supply officer, LCDR Frederick C. Burgess, SC, USN, had a solution. He obtained a portable galley and two portable refrigerators and had them installed on the ship's helicopter deck. The supplies in the ship's reefers and necessary cooking utensils were transferred to portable units topside.

The portable refrigerators enabled the cooks to prepare meals along the lines of the same menus which have earned for *Eldorado* one of the top tributes that a crew can pay a ship—"She's a good feeder."

After being cooked, the food was carried in "squareheads" from the temporary galley, down two decks, to the steam line in the mess hall. Here the food was served in the usual manner.

The dishwashing process was something different, however. Since there was no portable dishwashing machine available while the old one was being replaced, dishes were washed on a "do it yourself" basis.

An assembly line of kettles and buckets was set up. After the meal, each man entered the assembly line. He placed his cup in a large kettle of hot, soapy water; his silverware in three buckets, one each for his knife, fork and spoon. Finally, the tray was scrubbed in a huge container of hot, soapy water. Another container provided a rinse bath. Supply and Medical Department officers continually insured rigid hygiene standards.

Although portable galleys and refrigerators have often been used by ships being overhauled, *Eldorado* believes that this is one of the first times a ship has used these items together with improvised "do it yourself" dishwashing.

state having jurisdiction over your claim.

Your benefit rights will be determined by the law of the state in which you file a claim for unemployment benefits.

All state laws contain the following provisions regarding eligibility for benefits. The applicant must be unemployed; must register for work and file a claim at a local state employment office; must have had a certain amount of active service in the armed forces, within a base period of one year specified in the state law; must be available for work; and must continue to report at the local employment office, as directed.

There's always a possibility that an individual can be disqualified for benefits, as provided in all state laws. The most common reasons for disqualification include: quitting a civilian job voluntarily without good cause; being fired for misconduct connected with the civilian job; and refusing a suitable job without good cause.

The amount of weekly unemployment benefits and the number of weeks a person will receive them depend upon the law of the state having jurisdiction over the claim. State laws provide varying amounts of benefits, depending on pay and allowances applicable to your pay grade at the time of separation from active military service and any other state-covered earnings you have had in your base period. The weekly amounts range from $26 to $45, and periods range from 16 to 30 weeks in a benefit year. These weekly benefits are increased in some states by allowances for dependents.

To make a claim for unemployment compensation, the following records are needed:

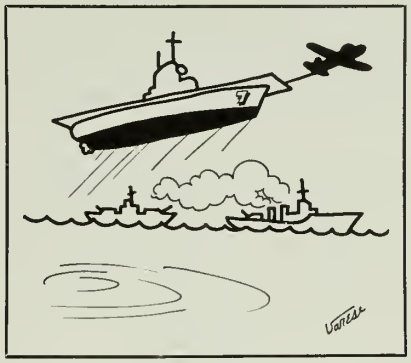
1. Separation Form DD-214.
2. Social Security Card.
3. Record of employment, if any, both before and after military service.

In the event your claim for unemployment compensation is disapproved and you are declared ineligible for or disqualified from benefits, you have the right to appeal that is provided in the applicable state law. However, the federal law provides that the appropriate federal agency's determination of your active military service, your pay grade at the time of discharge or release from active military service, and the type of discharge or release which you received from such service shall be final and conclusive. If you believe that the information on your separation document is incorrect, you may ask for a review by the appropriate federal agency.

Extreme care should be used in filing claims. Persons making a fraudulent claim are subject to a fine or imprisonment, or both. If you make a mistake in giving information when you file your claim, notify the local office as soon as you discover the mistake, in order to avoid penalties.

Persons residing outside the United States after being separated are not eligible for unemployment benefits until they return to the States or Puerto Rico or the Virgin Islands.

R. Varesi, ADAN, USN



"That catapult never works right!"

Once Again It's a Happy Tale of WO

Three first class and 21 chief petty officers have been issued temporary appointments to Warrant Officer, W-1. The appointments were made from an eligibility list established by a selection board in 1958.

The appointments were broken down into the following designators: Boatswain (7132), four; Surface Ordnance Technician (7232), three; Machinist (7432), four; Electrician (7542), two; Aviation Electronics Technician (7612), one; Communications Technician (7642), one; Electronics Technician (7662), three; Aerologist (8212), one; Photographer (8312), one; Civil Engineer Corps Warrant (8492), four.

Earlier in the same month announcement was made of the appointment of six first class and 21 CPO's to Warrant Officer, W-1.

The Regular Navy appointments at that time were broken down into the following designators: Boatswain (7132), four; Aviation Ordnance Technician (7212), one; Mine Warfare Technician (7342), one; Aviation Maintenance Technician (7412), one; Machinist (7432), four; Electricians (7542), seven; Aviation Electronics Technician (7612), two; Electronics Technician (7662), one; Ship Repair Technician (7742), two; Medical Service (8172), two; Dental Service (8182), one; Civil Engineer Corps (8492), one.

Seaman School Trains Sailors on *USS Tweety*

If you're a seaman apprentice at the Naval Air Basic Training Command, Pensacola, Fla., you're going to qualify as a seaman in a jiffy—or the leading PO in the new Seaman School isn't Bo'sun's Mate Joseph W. Hooker.

The eight-day school gives CINCLANTFLT seaman apprentices instruction on such subjects as watch standing, uses of sound powered telephones, steersman duties, knot-tying and splicing, ship recognition, UCMJ, gunnery (which includes small arms and types of ammunition), and General Quarters.

Besides the classroom instruction, students practice on a mock-up of a destroyer escort known as USS *Tweety*. The ship is also used by Naval Reservists in the area. On the bridge of *Tweety*, students are taught to use navigational and signaling gear. Students are usually taken aboard USS *Antietam* (CVS 36) where they can see firsthand the duties of a seaman.

The school was set up at NAAS Whiting Field (near Pensacola) under the Information and Education Officer, LTJG Wayne E. Loy. The station had found that the average seaman apprentice coming aboard has experienced no sea duty. At the end of his shore duty, he would probably be going aboard ship as an inexperienced man. Hooker, who conducts most of the classes, hopes to remedy this.

At the end of the eight-day course, Instructors who come from the Base's MAA force, give a final written examination. If an SA passes, he's advanced to Seaman.

Another Report? There's a Good Reason for the New ODCR

SHIPS AND STATIONS throughout the Navy have now begun to receive their regular monthly copies of the new Officer Distribution Control Report (NavPers 2627), which will eventually replace the Roster of Officers (NavPers 353).

In format the ODCR is quite similar to the Roster of Officers, except that the new report contains a number of additional items used in controlling assignments. Once the report comes into full use *it will help the Navy to employ the special skills, experience and training of its officers better, and it will benefit the individual by making more accurate, complete and up-to-date information about him available to those who must decide on matters affecting him.*

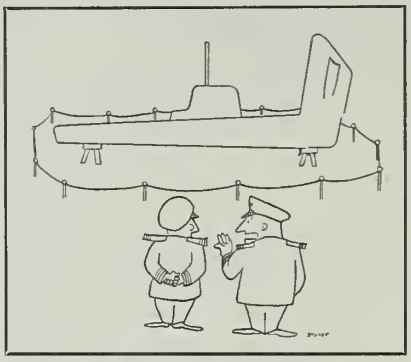
Before the ODCR was adopted, a thorough study was made of the essential reports needed for effective officer personnel administration, and an integrated data processing information system was designed and developed.

The ODCR is part of the new Naval Manpower Information System, built around the Electronic Data Processing Center at this Bureau. Plans for the NMIS were approved by the Chief of Naval Personnel in June 1956, and the Data Processing Center "opened for business" in July 1958. (See ALL HANDS, September 1958.) Besides the large-scale, electronic digital computers, which is the heart of the Data Processing Center at the Bureau, the system includes master magnetic tape records on personnel, billets and activities and a streamlined reporting system for keeping the master tape files up-to-date.

The master magnetic tape record on active duty officers was designed to contain essential items of information which: identify each officer; record his formal education, completion of naval schools and qualifications attained; and briefly summarize his past duty assignments.

To get the magnetic tape files started, available data was consolidated by the Bureau from various punched card files and officer records—particularly the Officer History Card (NavPers 765) and the Officer History Supplement and Preference Card (NavPers 765A). In this way, a "Data Bank" on active duty officers has been established, so that the digital computer can be programmed to compile the reports needed for effective officer personnel administration.

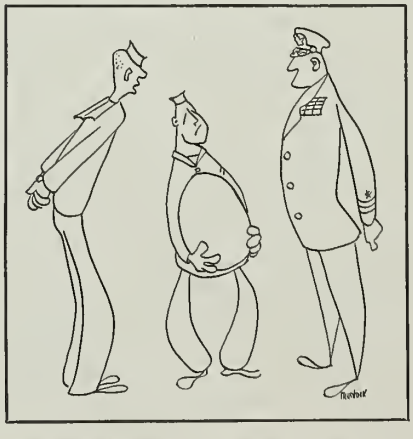
All-Navy Cartoon Contest
D. R. Stoner, PN3, USN



"They'll go nuts trying to figure out where the torpedo came from."

Copies of the inaugural ODCR, prepared from information on hand at the Bureau, were mailed out to each ship, station and unit in March of this year, so that the master tape could be corrected and data known at the activity level could be added to it when the reports were returned. The resulting changes, corrections and additions have now been taken care of on the master tape record, and in May the Bureau started the regular monthly mailing of the report to all activities so that further changes can be entered in the record as they occur.

All-Navy Cartoon Contest
L. Murdock, SMSN, USN



"He said he found it in the crow's nest, Sir."

From these regular monthly copies, an activity will be able to tell whether or not the items for which it is responsible are still correct and up-to-date. Any changes are to be reported to the cognizant Personnel Accounting Machine Installation (PAMI), using the Officer Personnel Diary in accordance with NavPers 15,642—Instructions for the Navy Personnel Accounting System, Part I.

The new report will fill three basic needs:

- First—Each month, it will provide distribution officers at the Bureau and in the field with the comprehensive collection of information now available through the Roster of Officers (NavPers 353).
- Second—It will give each naval activity a current and projected officer status report compiled from Bureau records.
- Third—It makes it possible for the master tape record to be verified and kept up to date just by an activity reporting corrections and changes on the Officer Personnel Diary.

Activities will have primary responsibility for seven items on the report. These are:

- The assignment of Billet Sequence Codes to officers, except in certain cases. (Since commanding officers are assigned by the Bureau, they are among the exceptions.)
- Date assigned to Primary Billet.
- Date Reported.
- Date Dependents Arrived on Overseas Station (DOS)—if applicable.
- Occupying Public Quarters with Dependents (OPQ)—if applicable.
- Collateral Duties.
- Duties in Training For and Prospective Qualification Date.

The Officer Distribution Control Report will have many important applications. For instance, it will be used to compile strength reports, to determine personnel re-

quirements and allowances and to analyze and record the qualifications which officers have gained through experience in billet. Because of its importance, commanding officers have been instructed to become thoroughly familiar with it and the new reporting system.

The report is considered a forward step toward streamlining the flow of personnel information and reducing the number of reports which each activity must now prepare. In the past, whenever new information not readily available in the Bureau was needed, it was often necessary to request new reports from the field. However, the new system should sharply reduce the need for such reports, because of the comprehensive data bank which can now be maintained on magnetic tape.

The new report and reporting system were introduced in BuPers Inst. 1301.32.

List of New Motion Pictures Scheduled for Distribution To Ships and Overseas Bases

The latest list of 16-mm. feature movies available from the Navy Motion Picture Service, Bldg. 311, Naval Base, Brooklyn 1, N. Y., is published here for the convenience of ships and overseas bases. The title of each picture is followed by the program number.

Those in color are designated by (C) and those in wide-screen processes by (WS). Distribution began in May.

These films are leased from the movie industry and distributed free to ships and most overseas activities under the Fleet Motion Picture Plan.

In Love and War (1295) (C) (WS): Drama; Robert Wagner, Dana Winters.

Man of the West (1296) (WS): Western; Gary Cooper, Julia London.

Rally Round the Flag Boys (1297) (C) (WS): Comedy; Paul Newman, Joanne Woodward.

Lonely Hearts (1298): Drama; Montgomery Clift, Robert Ryan.

Some Came Running (1299) (C) (WS): Drama; Frank Sinatra, Dean Martin.

The Sheriff of Fractured Jaw (1300) (C) (WS): Comedy; Kenneth More, Jayne Mansfield.

Gunsmoke in Tucson (1301) (C) (WS): Western; Mark Stevens, Forrest Tucker.

I Was Monty's Double (1302): Drama; John Mills, Cecil Parker.

Auntie Mame (1303) (C) (WS): Comedy; Rosalind Russell, Forrest Tucker.

Frontier Gun (1304) (WS): Western; John Agar, Joyce Mathews.

Tom Thumb (1305) (C): Fantasy; Russ Tamblyn, Alan Young.

Nowhere to Go (1306): Drama; George Nader, Maggie Smith.

The Mating Game (1307) (C) (WS): Comedy; Debbie Reynolds, Tony Randall.

King of the Wild Stallions (1308) (C) (WS): Western; George Montgomery, Diane Brewster.

The Hanging Tree (1309) (C): Western; Gary Cooper, Maria Schell.

A Night to Remember (1310): Drama; Kenneth More, Ronald Allen.

Notorious Mr. Monks (1311) (WS): Drama; Vera Ralston, Don Kelly.

Born Reckless (1312): Drama, Mamie Van Doren, Jeff Richards.

Speed Crazy (1313): Drama; Brett Halsey, Yvonne Lime.

Al Capone (1314): Drama; Rod Steiger, Fay Spain.

Preparatory Course Available For Professional Engineer

If you're a Navy engineer interested in preparing for examinations leading to registration and licensing as a professional engineer, a new extension course is available to you.

Entitled "Professional Engineer Preparatory Course," it is being offered by the U. S. Army Engineer School, Ft. Belvoir, Va.

Designed for engineers preparing for licensing examinations, the course is flexible enough to provide a study program regardless of the extent of your training and experience.

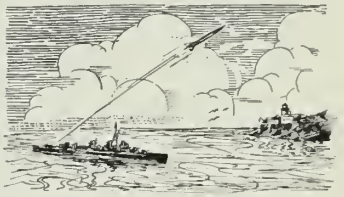
Any Navyman as well as any member of the armed forces or any career government employee who qualifies may enroll. The course is administered by correspondence in a manner similar to the Navy's officer correspondence courses. No promotion credit is granted for completion.

Information and enrollment applications may be obtained by addressing Commandant, U. S. Army Engineer School, Ft. Belvoir, Va.

HERE'S YOUR NAVY

The giant strides which have been taken toward the conquest of space —we learn from NOL's newspaper "report"—have focused attention on some rather glamorous missiles such as *Vanguard*, *Atlas* and *Jupiter*. But less well known are the workaday missiles used in research.

An example of these research missiles is the sounding rocket *Dart*, developed to measure airblast shock waves in nuclear explosions. In measuring these shock waves it was necessary to place a series of identical payloads in a large number of points in space at a given time and then return them by parachute to the ocean



surface for recovery. Altitude requirements ranged from 2000 to 15,000 feet.

The rocket has two basic parts, the booster and *Dart* itself. *Dart*, which measures six inches in diameter and six feet in length, contains a nose cone, the instrumentation payload, parachutes and recovery gear. It is separated from the booster at time of burnout by drag and continues on a ballistic trajectory.

The rocket operates like this: before firing, a timer contained in the *Dart* is started. After firing and during the period of thrust, the rocket is held together. At the end of the thrust period, drag forces acting on the sys-

tem cause the missile and the propulsion unit to separate. Later, the timing unit starts the recorder. Still later, the parachute is released and at parachute opening the nose cone breaks free of the *Dart*, exposing the pressure probe. Simultaneously, a smoke grenade is fired to aid in determining *Dart*'s position. A few seconds before the arrival of the shock waves, the *Dart* is sealed and the system is ready to record.

The water recovery system consists of a balloon, which is inflated after water contact and raises an antenna, and a small radio transmitter to lead the recovery team to the payload.

BOOKS

LOTS OF GOOD, NEW VOLUMES HEADED FOR NAVY LIBRARIES

THREE BOOKS concerned with World War II and two with the cold war of today, plus a Navyman's autobiography, have been selected for review this month. You'll find some of these, and many others, at your ship or station library. Drop around and see what's new.

The Nine Days of Dunkirk, by David Divine, and ***D-Day,*** by David Howarth, form a dramatic contrast. The first describes one of the darkest periods faced by the Allies; the second, their victorious return.

Dunkirk has been called "the most dramatic withdrawal in modern history" and a turning point of World War II. For his version, Divine has tapped many sources—enemy and allied, official and personal, general and private—to create a vivid tale of pure heroism. He tells of the famous rescue armada, which included 848 ships of all sizes and shapes from destroyers and channel ferries to fishing smacks and private yachts, which carried, under a storm of German bombs and shells, more than a quarter million men across the channel to England and safety.

As Howarth says in his foreword to *D-Day,* several technical military works and generals' memoirs have been written about the invasion of Normandy. However, his primary interest lies in the experiences of the men who landed in the night and dawn of 6 Jun 1944. He tells what it's like to be dropped from the sky that morning, or pitched ashore from a landing craft on a hostile beach—and he does a superb job. But there's more to it than that. The first section of his book gives a picture of England and the tremendous preparations; the paper work, weather forecasting, the assembling and training of men and machines, the secrecy, the last minute changes and emergencies and then, finally, the unleashing of the gigantic forces accumulated. Then comes the sections on the air drops, followed by the landing itself—all kinds of ships, landing craft, submarines, tanks, planes, parachutists, infantry. He gives enough official background to form a frame of reference for the men's experience, but no more than necessary. He succeeds in making history exciting and interesting.

One Man Band, by RADM Ben Bryant, USN, is exciting enough but in a category different from *D-Day.* The author joined the British submarine service before World War II and, when it arrived, became a distinguished sub skipper. He took part in the grim Norwegian campaign, survived the hazards of depth charges, ramming and suffocation. He landed and picked up agents in Occupied Europe, and preyed on Rommel's supply lines to North Africa. USN submariners will be interested to observe how their same occupation was followed on the other side of the Atlantic.

Two books are concerned with our relations with the Soviet Union. ***Protracted Conflict*** by Robert Strausz-Hupe, William R. Kintner, James E. Dougherty and Alvin J. Cottrell is, says the publisher, the first book to analyze and portray the Communist threat in terms of strategy and tactics. The authors maintain that we are in the midst of a world revolution which the Communists believe they are historically destined to lead and out of which they hope to create a new world order. Only by understanding the principles and methods of the strategy of protracted conflict will we be able to combat it effectively.

War and the Soviet Union by Herbert S. Dinerstein offers the thesis that the appearance of nuclear weapons and of vastly improved vehicles for their delivery has caused the great powers to re-examine their fundamental ideas about warfare. In the Soviet Union, this re-examination did not begin until after the death of Stalin; then a controversy on military theory continued until it was finally resolved with Malenkov's political defeat. Here, Dinerstein gives an account of this controversy and of the military and political consequences of this revolution in Soviet thinking. It also provides a record of the views now held by Soviet leaders on the questions of preventive war, preemptive blows and nuclear warfare.

In ***Navy Surgeon,*** RADM H. Lamont Pugh, USN, MC, (Ret.) tells the story of his life from his boyhood days in backwoods Virginia to his retirement. Except for an enlistment in the Marine Corps during World War I and the time spent in medical school, his entire life was spent in medical practice or administration in the Bureau of Medicine and Surgery. His medical experiences range from those of an intern (as a lieutenant) to Surgeon General (as a rear admiral).

Two items of fiction lighten this month's list. ***Adams of the Bounty*** by Erle Wilson, offers another version of one of the greatest sea stories of our literature. Here, Wilson disputes the usual approach which makes Fletcher Christian the hero and Bligh the villian. He places in a different light the plot to seize the ship; the flight and the settlement of Pitcairn Island; the disputes and the massacres—first of the whites and then of the Polynesians—and the final acceptance by Adams of the leadership he had earlier avoided.

The Scarlet Feather by Dale Van Every, is another frontier novel with the usual complement of Virginia gentry uprooted from their homes and forced to settle in the rough and untamed wilderness of the Ohio country, renegade whites, bad Indians and good Indians. A number of fair young maidens, plus an overabundance of suitors, also happen to be involved in the carrying-on.

Navy Walking Libraries And Talking Books

In a hospital, reading is an effective remedy for boredom and worry, so the Naval Library Program makes a special effort to please hospitalized "customers."

For bed patients who can't get to the library, the library goes to them through regular book cart service, and if the book the patient wants isn't on the cart, he can usually order it. In addition, such special reading devices as "talking books," mechanical page turners and projected books are available when needed.

One such library, located at the Naval Hospital, San Diego, Calif., recently celebrated its 36th anniversary.

The library started out in 1923 with 3400 volumes on its shelves.

Today, its "customers" have more than 29,000 books at their disposal, including a good-sized medical library.

ALL HANDS
BOOK
SUPPLEMENT

CUTTING THE CABLES AT CIENFUEGOS

During much of the Spanish-American War, the U. S. Navy held virtual control of the sea. In Cuba, only one loophole remained to be stopped—communications to and from Havana. This tells how it was accomplished.

At the outbreak of war in 1898 between the United States and Spain, the Fleet at Key West had its tasks laid out. The immediate responsibility was to establish a blockade of the island of Cuba—then a Spanish colony with many dissident elements.

The blockade became virtually effective along the entire coastline of Cuba, preventing the landing by Spanish forces of food supplies and munitions, as well as cutting off communications.

This, however, was not enough. Spanish General Blanco at Havana was still in direct communication with many of the islands of the West Indies by ocean telegraph cables, and thence with the home government at Madrid. To cut these cables and thus destroy the Spanish telegraphic lines of communication, preventing the authorities at Madrid and at Havana, and the ships of Admiral Cervera's fleet, from sending or receiving information, was of the utmost strategic importance.

Here is a report by Navy LT Cameron Winslow, who played an important part in this assignment.

SHORTLY BEFORE SUNDOWN on May 10, signal was made directing the commanding officer of USS *Nashville* and me to repair on board *Marblehead*.

On our arrival on board that vessel, we were informed by Commander McCalla that he intended to make an attempt at daylight the following morning to cut the ocean telegraph-cables; that an expedition of boats under my command would be sent in to endeavor to find and cut the cables landing near Colorados lighthouse, that the expedition would be opposed by a force of the enemy, and that *Marblehead* and *Nashville* would shell the country and attempt to dislodge the enemy or silence his fire.

I was told that I could have the steam-cutter and the sailing-launch of *Marblehead* and the steam-cutter and the sailing-launch of *Nashville*, and that Lieutenant E. A. Anderson of *Marblehead* would accompany the expedition as second in command. I had no further orders as regards the fitting out of the expedition, the details being left entirely to my own judgment.

I decided, after conference with Lieutenant Anderson, to take no more men in the sailing-launches than just enough to do the work. Each sailing-launch pulled 12 oars; the crew, therefore, consisted of 12 men and a cockswain. The only men additional to the crew were to be the blacksmith and a carpenter's mate, making, with the officer in the boat, 16 men in all.

HALF OF THE MEN were to be armed with revolvers and the other half with rifles. A few extra rifles and an ample supply of ammunition were to be put in the boats.

The tools for cutting the cables, to be carried in each sailing-launch, consisted of cold-chisels, blacksmiths' hammers, a heavy maul, a block of hard wood with

From "Cable-Cutting at Cienfuegos" by Lieutenant Cameron McR. Winslow, USN, pp. 708-717, *Century Magazine*, March 1899, Vol. 57.

iron plate for its upper surface, an ax, wire-cutting pliers, and a hacksaw. Coils of stout rope and grapnels of different sizes were to be used in grappling the cables and bringing them to the surface.

Having previously seen some service in connection with laying ocean cables, I was perfectly familiar with the character of the cable to be dealt with, and fully realized the difficulties to be encountered. Owing to the chafing on rocks and other irregularities of the bottom, due to the swaying of the cable with the motion of the waves and tides, it is customary to use very large and heavy-armored cable, specially protected, for the section reaching from the deep water to the shore. This is known as the "shore end." So far as the cutting of the cable was concerned, it was equivalent to cutting through a bar of iron about as thick as a man's wrist.

The cable-house which received the shore end of the cable was a small cubical box of a house, built of the same white stone as the lighthouse.

Before leaving *Marblehead,* I went on the bridge with Commander McCalla, and with our binocular glasses we carefully examined the shore line and the country about the cable-house. Leaving Lieutenant Anderson to select the crews and fit out the boats of *Marblehead,* I returned to *Nashville.*

On board *Nashville* a few changes were made in the regular crews of the boats, such men as were physically unqualified for the work being replaced by others. That night the boats were equipped and all preparations made for the expedition.

THE FOLLOWING MORNING at early dawn, Commander Maynard and I were again signaled to repair on board *Marblehead,* where we received our last instructions. The orders were, briefly, to cut the cables landing to the east of the lighthouse and drag them into deep water, cutting off as much as possible of the ends.

My own individual orders were very brief. I was simply to cut the cables as directed above, and under no circumstances to land. Just before leaving *Marblehead,* I went on the bridge with Commander McCalla, and as the ship steamed inshore to within a mile of the cable-house, we made a last examination of the enemy's position. Just back of the cable-house was a rocky bluff behind which one might find safety even from the shell fire of our ships. All over the slope of this part of the hill were rocks, trees, and chaparral, rendering an enemy invisible, as well as affording him good protection.

At half-past six *Nashville's* boats were ready, and after a careful inspection to see that they were properly equipped, the boats shoved off from the ship's side, and were soon joined by *Marblehead's* boats.

At a quarter to seven *Nashville* signaled, "Ready," and *Marblehead* immediately answered, "Execute orders."

Almost immediately *Marblehead* opened fire, and hardly had the boom of her first gun died away before *Nashville* took up the firing, both ships firing deliberately with main and secondary batteries.

AT FIVE MINUTES TO SEVEN, while the ships were still firing, the flotilla of boats steamed across *Nashville's* bows and headed for the land, *Nashville's* boats leading, the steam-cutters towing the launches. Soon the shells were bursting all about the cable-house and the rocky bluff in its rear. In a few minutes the house was struck, the shells apparently piercing both the front and rear walls and bursting against the rocks of the bluff behind. As the boats neared the land, the ships slackened their fire, and the steam-cutters began firing on the rifle-pits. When three or four hundred yards from the shore, fearing to ground the steam-cutters on the reefs, they were ordered to let go the tow-lines and take position in rear of the launches and on their starboard quarter.

The deep water off the coast made futile any effort to grapple the cables where the bottom could not be seen through the clear water. As we neared the land, a cavalryman on a white horse left the beach and galloped at top speed up a rugged path leading over the ridge. The sharp-shooters in the steam-cutters tried to stop him, but, from the uneasily tossing boats, their aim was inaccurate, and he disappeared.

This man carried the news of our attack to Cienfuegos, and soon reinforcements were marching to the scene of action. He was the only cavalryman in view after the firing began; the others were, in all probability, killed by our shellfire in the early part of the bombardment.

Keeping a good lookout for rocks and reefs, the boats pulled steadily on, the inaccurate Cuban charts giving us little information as to the distance from the land at which we should find shoal water.

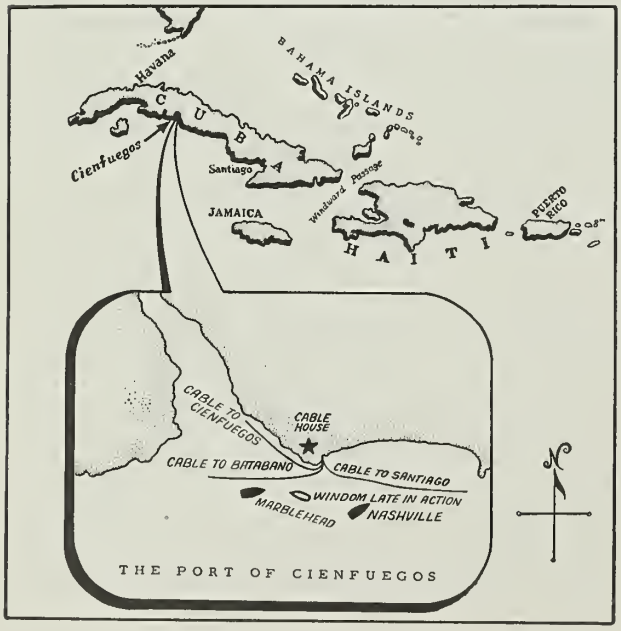
Nearer and nearer the boats approached the land, and it seemed that we should not sight the bottom at all.

We were now within about a hundred feet of the shore-line, and with the eastern end of the rifle-pits about fifty feet farther back.

Suddenly the dark patches of coral cropping up from the white sand of the bottom were seen through the clear water, 30 or 40 feet in depth. The grapnels were at once thrown overboard and the dragging began in earnest.

Hardly had the boats moved a length before the grapnels caught under the coral rocks, and it became evident that the cables would have to be sighted before they could be grappled. Then the boats pulled in close, *Nashville's* launch nearest the rifle-pits, until the water shoaled to less than 20 feet, the steam-cutters, a couple of hundred yards outside the fire of the rifle pits, holding the enemy down in the trenches.

MAP SHOWS location of cable cutting operations by American ships to stop Cuban communications in 1898.



FIRE AWAY—*USS Nashville* (foreground) and *USS Marblehead* blast enemy shore as boats move in to chop cables.

ALMOST IMMEDIATELY *Marblehead's* launch, a hundred yards to the eastward of *Nashville,* hooked the cable leading to Santiago. At the same time a cable, probably the one already grappled, was sighted by *Nashville's* boat. Without making any attempt to hook this cable, *Nashville's* launch went to the assistance of the other boat.

Both boats had now hooked the cable, and 30 strong men were laboriously lifting the dingy object from its bed 20 feet below. The heavy cable, laid taut along the bottom, seemed to weigh tons.

As it was dragged to the surface, ropes were passed under it, and it was gradually worked over one corner of the stern of the boat, and then by sheer force was dragged into the boat and lifted over the rollers on the bow and the stern.

The task of lifting it into the other boat was easier. After both boats were under the cable, one ahead of the other, the steam-cutters took tow-lines from the leading boat and went ahead at full speed.

The men in the launches, by heavy hauling and the assistance of the steam-cutters, slowly underran the cable. This cable was laid in a southerly direction until a depth of about two fathoms was reached, then the direction was changed sharply to the eastward and followed the line of the reef.

At this point *Nashville's* launch stopped and began to cut the cable. Axes and cold-chisels were tried, but the hack-saw, a small hand-saw about nine inches in length used for cutting metals, was found to be the most effective. With this saw, by frequently changing the men using it, the cable was cut through in from 20 minutes to half an hour.

WHILE THE CABLE was being cut at this point, *Marblehead's* launch was working to the eastward, dragging it across the boat. Having made the first cut, *Nashville's* launch, following *Marblehead's* launch, underran the cable, bending it and coiling it down in the stern-sheets and across the gunwale of the boat, it being the intention to throw it overboard in deep water or carry it off to the ship.

This cable was underrun until it was found to pass under a ledge from which it could not be disengaged.

While attempting to drag it clear of this ledge, a heavy sea, rolling in, swept over *Marblehead's* launch, which, being held down by the cable, was unable to rise to the sea.

After this narrow escape from swamping, no further effort was made to underrun more of this cable, and it was again cut, this time by the men in *Marblehead's* boat, the end left in 13 fathoms of water. The piece taken out was about 150 feet in length.

Up to this time the firing from the enemy had been desultory and ineffective, and no attention whatever had been paid to it by the working parties in the boats.

After cutting the cable leading eastward to Santiago, and without waiting to rest the men, we proceeded to search for the cable leading westward to Batabano.

In order not to make the mistake of picking up the cable which had already been cut, we pulled to the southward and westward of the cable-house, and approached the land to within 60 feet, as close as possible without wrecking the boats on the jagged shore.

WE WERE NOW DIRECTLY in front of the rifle-pits and hardly 100 feet from them.

The ships, realizing the danger of our position, increased their fire until it became a furious cannonade, the shells passing so close over our heads that the crews instinctively ducked as they went by and burst against the rocks beyond. They seemed to be coming closer.

READY TO GO—*USS Nashville* played important part in Spanish-American War by cutting cables at Cienfuegos.

Marblehead was directing her fire particularly close to us, and her excellent gun practice, due to months of hard work before the war, excited our admiration, though our situation was uncomfortable.

The shells could hardly have come closer to us without hitting the boats. We realized that we had to take the chance of an accidental hit from our ships or receive the fire of the enemy at pistol-range, and the men worked on in disregard of both.

We soon located the cable, but found it very difficult to hook it with the grapnels, as the sea, striking the coral shore, rolled back against the boats, disturbing the surface of the water, and making it hard to see the bottom. When finally hooked, this cable was harder to lift than the other, as it was laid even more taut along the bottom, and the rough water knocked the heavy boats together, breaking and almost crushing in their planking.

The men were becoming very tired. I urged them to increase their efforts, working with them myself. I told them that we should soon be under heavy fire unless we finished and got away.

Whenever the ships slackened their fire, the enemy would begin firing, probably from the lighthouse, and then, as my attention was called by one of the men to the bullets dropping in the water about us, I would order the steam-cutters to open fire, the ships immediately resuming the bombardment on seeing our boats engaging the enemy. Occasionally, when the men could be spared for the work, a couple of them were directed to open fire from the launch with their rifles.

This was all the fighting that we in the working boats did until after the second cable had been cut. This cable was lifted and handled just as the first one had been, *Marblehead's* launch cutting the inshore end, and *Nashville's* launch underrunning it to the westward and making the offshore cut. Out of this cable a piece about 100 feet in length was taken and coiled down in *Marblehead's* boat.

WHILE LIFTING the second cable, we discovered a third, much smaller in diameter than the others, near by. Its appearance indicated that it was not an ocean cable, and I surmised that its purpose was to connect the cable-house with Cienfuegos, which we afterward learned to be true. Although the important part of the work had already been accomplished, I determined to make an effort to cut this small cable, knowing that it was of little importance, but believing that the work could be quickly done.

At this time the ships had almost ceased firing, and the enemy had apparently given up the attempt to drive the boats away. We could see nothing of the Spaniards.

The reinforcements had, however, reached the enemy, and while the scene was one of tranquillity, the Spaniards were creeping through the chaparral, occupying the trenches and light-house, and extending their firing line along the ridge and down its slope. They took their position skilfully and with courage.

The boats were now trying to hook the third cable, but the freshening breeze roughened the surface of the water, making it difficult to see the bottom and to keep the boats clear of the coral rocks.

It was slow work, instead of being easy, as we had anticipated. Many times the boats crossed over the cable, failed to grapple it, and drifted away to within a boat's length of the shore, almost in the angry water of the seas rolling in and breaking on the rocky shore. After many efforts the cable was finally grappled, *Nashville's* boat being not more than 50 feet from the shore and *Marblehead's* a boat's length farther out, both boats being within 200 feet of the trenches and directly in front of the demolished cable-house.

In *Nashville's* launch we were trying to bring the cable to the surface at the bow of the boat, and I was forward superintending the work.

Suddenly the enemy opened fire with their Mauser rifles. We could not tell from what direction the fire came, as the smokeless powder gave no sign of their position, and the wind blowing in from the sea carried the sound away from us, or else it was drowned by the roar of the breakers.

We saw the splash of the bullets in the water about us, and I ordered the steam-cutters to open fire again.

Now the bullets began dropping so fast that the little sheets of spray where they struck the water could be plainly seen by the ships, and those on board realized that the enemy was in force, and began a terrific cannonade.

Hoping that the ships would be able to check the enemy's fire, we worked on in the boats until we brought the cable to the surface. The ships were now searching out the country with shell and shrapnel. All along the ridge and down its sides our projectiles were falling, shattering the rocks, bursting, and sending the fragments into the air in clouds of dust.

Over our heads *Nashville* was throwing shrapnel about the trenches. Still the enemy's fire increased, most of the bullets falling between the launches and the steam-cutters, which lay 150 yards to the eastward and outside the reefs.

After getting a rope under the cable and securing it, I stood up in the boat and made a rapid survey of the situation. Anderson and his men were still working hard in their boat, a little to seaward of *Nashville's*.

JUST THEN I SAW a Marine in the *Marblehead's* steam-cutter fall, shot through the head. Turning in the direction of Anderson's boat, I saw one of the men drop, struck by a Mauser bullet.

As I faced the shore to look at the trenches, a seaman, Robert Volz, standing in the stern-sheets of my boat, collapsed, then struggled to his feet, and immediately after sank in the bottom of the boat, a gaping wound six inches long in his head, two bullet-holes through his body, and a bullet in his shoulder, probably the result of machine-gun fire.

Had the gun been depressed a little more, hardly a man in the boat would have escaped being hit. This man lived, and 10 days later, while *Nashville* was at Key West, he ran away from the hospital on shore, came off to the ship in one of our boats, and reported back for active duty. His spirit was typical of our crew.

The enemy's fire was now very hot, the bullets making a peculiar snapping noise as they struck the water all about the boats. The enemy was using a field-piece in the direction of the lighthouse, and also machine-guns.

It was evident that we could do no work under such conditions, and I ordered the men in the launches to cease work and to open with their rifles. We directed our efforts against the trenches, hoping to demoralize the enemy located there. They were within easy pistol-range, and I began firing with my revolver. The ships were now at work furiously, but the enemy's bullets continued to hit the boats and the water about them in undiminished numbers. The ships could not check the enemy's fire.

WE HAD ACCOMPLISHED what we had gone in to do. I ordered the steam-cutters to stand by to take the launches in tow, and ordered the crews of the launches to man their oars to pull the boats clear of the breakers.

The men were perfectly cool and showed no sign whatever of fear or uneasiness. The men not engaged in getting out the oars continued their fire. I myself had replaced my revolver by a rifle.

While standing in the boat and reaching for a rifle which one of the men had loaded for me, I was struck in the left hand by a bullet, which passed through the joint of one finger and scored two other fingers. The wounds were only momentarily painful. After wrapping a handkerchief around my hand, I continued firing. The launches pulled slowly out against the sea, replying as they retreated. Ensign Magruder brought the steam-cutters in promptly and skilfully; his boat was struck, but fortunately none of the crew was injured.

Marblehead's launch, in tow of the steam-cutter, got away first, and turning to the westward, headed for that vessel, passing within easy range of the enemy occupying the lighthouse. The bullets could be seen plowing up the water about *Marblehead's* boats, hitting the launch many times and badly wounding five of the crew.

Nashville's boats came out last and headed to the southward, making slow progress against the head sea, still engaged, and under hot fire from the enemy.

Commander Maynard had been struck by a piece of a Mauser bullet, and *Nashville,* temporarily commanded by her executive officer, Lieutenant A. C. Dillingham, steamed from the eastward close along the reefs, giving shelter to the boats as she passed between them and the enemy, and receiving the fire to which they would otherwise have been subjected.

After *Nashville* had given the launch a line, she turned slowly southward, the launch towing on the port side.

AS SHE SWUNG AROUND, the launch again came under fire, and remained under fire until out of range, parting the tow-line twice as she plunged into the head sea while being towed out. After seeing the men out of the launch, I went to the bridge, expecting to steam in and open again on the enemy; but as we had begun to hoist our boats, we could not go, and I ordered the revenue cutter *Windom* to report to *Marblehead.*

That vessel was still firing, and as the enemy had been sheltered behind the lighthouse, which, up to this time, had been spared, *Marblehead* was compelled to make the lighthouse her target, the little *Windom* steaming in to close range and taking part in this bombardment.

From the bridge of *Nashville* we watched *Marblehead's* gun practice. The accuracy of her fire bore tribute to the untiring energy of Commander McCalla in bringing his crew to so high a state of efficiency and marksmanship. The dwelling-house of the lighthouse-keeper was riddled with shells.

TEAM MATE—Men from *USS Marblehead* teamed with those from *Nashville* to cut Spanish communications.

The tower of the lighthouse was cut through by shell after shell, almost with the accuracy of a saw. Falling, it demolished the light-keeper's dwelling.

At 20 minutes past 11 the firing had ceased, and the ships stood offshore to the southward and westward. On board *Nashville,* the captain, Ensign Snow, and Pay-Clerk Southgate, and many of the men had been struck by spent bullets or fragments of bullets, but not one of them was seriously injured.

THE BOATS WENT in a little before seven o'clock, and did not return to their ships until 10:13.

They were exposed to the fire of the enemy for more than three hours, and were under very hot fire at close range for more than half an hour.

It seems remarkable that there should have been so few casualties. One man was killed, one man mortally wounded, six men were severely wounded, and one officer was slightly wounded. The boats were frequently struck inside and out, and *Nashville* had the marks of bullets from her water-line to the top of her smoke-pipes.

The enemy suffered severely, for the bombardment by the ships was terrific.

A few days after the fight we communicated with the insurgents, who were in close touch with Cienfuegos, and from them we learned that the loss of the enemy had been 300 killed and wounded.

The ships had previously dragged for the cables, but could not find them. In my opinion, they might have dragged until the end of the war without finding them. The cables could not have been cut at night, for they could not have been seen on the bottom, and the ships in the darkness could not have protected the boats. Under the search-light, the boats would have been an easy target for the enemy. To cut the enemy's lines of communication is always important, and from a military point of view, worth the expenditure of life.

This expedition, while dangerous, was by no means a forlorn hope and warranted the risk of life.

LT Winslow, USN

LT Anderson, USN

TAFFRAIL TALK

THE WORLD'S BIGGEST fishhook is helping the Navy perfect its *Polaris* ballistic missile—and at a substantial savings, too.

"Fishhook" is the handle tacked on to a huge floating catamaran barge crane being used by the Naval Ordnance Test Station at San Clemente Island, Calif., to field dummy *Polaris* missiles on the fly after they're test-launched.

Built by the Long Beach Naval Shipyard, the giant crane protrudes some 100 feet out from the barge's stern on an angle, and its uppermost point towers 186 feet above the water.

The barge itself, of the catamaran, or two-hulled style, is composed of two YC barges, with a connecting centerpiece. Also on board is a housing for the retrieving engine, and an instrument van for use during test-launchings.

The awkward-looking but efficient aerial catcher's mitt was built to cut down on the expense and delay resulting when *Polaris* dummies, once launched, were allowed to drop back into the water. These dummies, loaded with highly complex test instruments, are still relatively expensive.

Fishhook is a sea-going version of Sky Catch, the device used during early tests at the San Francisco Naval Shipyard to snare *Polaris* dummies in mid-air. An aircraft carrier arresting gear engine is installed in the crane. Stationed over the submerged test-launching tube, it will catch the hurtling missile at the highest point of its flight, allowing it to be lowered to the barge and used again and again.

Scoffers claimed Fishhook "wouldn't float and couldn't work." The BuOrd experts say, however, that this "floating monument of the impossible" will help speed up *Polaris* development, and result in savings of many millions of dollars.

★ ★ ★

Five cool cats from USS *Trumpetfish* (SS-425), who call themselves the "Sea Notes," had a swinging good time during a recent tour with the Sixth Fleet in the Mediterranean—and helped their ship make a contribution to the People-to-People program in the process.

While visiting Naples, *Trumpetfish* hosted a group of 20 boys from the Villaggio Del Fanciullo School for underprivileged children. Highlighting the party were a tour of the ship, pumpkin pie ala mode and a serenade by the Sea Notes.

Organized and headed by electric guitarist LTJG Herb Woods, the Sea Notes also include Eddie Bourassa, SN, drummer; trumpetman Larry Blaesing, SN; guitarist Carl Issacks RM3, and Paul Johnson, ECFN, saxophonist.

The combo devoted many long hours to practice and preparation in the forward torpedo room while *Trumpetfish* was underway to the Med (there's no record of the forward torpedo room gang's reaction to all this) and were ready with some hot licks when they joined an unsuspecting Sixth Fleet.

The initial shock at the unusual sight of a submarine with a ship's band soon changed to more complex emotions as the group performed at the drop of a hat for one and all, including the flagship USS *Forrestal* (CVA-59.)

Last we heard, *Trumpetfish* was back home in Key West, Fla., where we presume the Sea Notes are busily enlarging their repertoire before their "underwater hit parade" goes to sea again.

The All Hands Staff

The United States Navy

Guardian of our Country

The United States Navy is responsible for maintaining control of the sea and is a ready force on watch at home and overseas, capable of strong action to preserve the peace or of instant offensive action to win in war.

It is upon the maintenance of this control that our country's glorious future depends. The United States Navy exists to make it so.

We Serve with Honor

Tradition, valor and victory are the Navy's heritage from the past. To these may be added dedication, discipline and vigilance as the watchwords of the present and future. At home or on distant stations, we serve with pride, confident in the respect of our country, our shipmates, and our families. Our responsibilities sober us; our adversities strengthen us.

Service to God and Country is our special privilege. We serve with honor.

The Future of the Navy

The Navy will always employ new weapons, new techniques and greater power to protect and defend the United States on the sea, under the sea, and in the air.

Now and in the future, control of the sea gives the United States her greatest advantage for the maintenance of peace and for victory in war. Mobility, surprise, dispersal and offsensive power are the keynotes of the new Navy. The roots of the Navy lie in a strong belief in the future, in continued dedication to our tasks, and in reflection on our heritage from the past. Never have our opportunities and our responsibilities been greater.

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The Bureau should be kept informed of changes in the number of copies required.

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• AT RIGHT: FAREWELL 48—As the National Ensign is hoisted on ship and station we are reminded that we're about to say good-by to the familiar pattern of stars. The new flag becomes official this month.

GO SAFELY

STOP

HILL

KEEP RIGHT EXCEPT TO PASS

YIELD RIGHT OF WAY

R R

COME BACK SAFELY

ALL HANDS

AUGUST 1959

ALL HANDS

THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN

AUGUST 1959 Nav-Pers-O NUMBER 511

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• **FRONT COVER: OUT ON A BOOM**—James Bertrand, SN, makes his way aboard heavy cruiser *USS Macon* (CA 132) after securing small boat to boom while his ship is at anchor.

• **AT LEFT: ATTENTION!**—Crew members of OI Division of Tactical Command Ship *USS Northampton* (CLC 1) look sharp as they square away topside while standing Captain's inspection on cruise out of Norfolk Va.

• **CREDITS:** All photographs published in ALL HANDS are official Department of Defense Photos unless otherwise designated.

Stormy Weather

USS *Valley Forge* (CVS 45)

The short article in ALL HANDS *(May '59) which described the ocean wave and its anatomy was all very well—as far as it went. However, we are the first to admit that a certain sense of immediacy was lacking. It was just a little academic. The force of nature on the high seas was absent.*

This lack is remedied here by LCDR Edward D. Maissian, USNR, *who, earlier this year performed his active duty for training on board* USS Valley Forge *(CVS 45). This is the way he saw it:*

DEPARTURE WAS REPEATEDLY delayed from one slack water to the next, because of the dense fog in the Hampton Roads area. It was not until Tuesday midmorning that *Valley Forge* cleared the Virginia Capes and stood out to sea. She was to relieve USS *Leyte* (CVS 32).

Rear Admiral John S. Thach, wearing three hats as Commander, Hunter Killer Force; Commander, Carrier Division 16 and Commander, Task Group Alfa, was embarked. The ship-based air group was composed of VS-36 (S2F aircraft), HS-7 (HSS helicopters) and a detachment of AD-5W planes from VAW-12.

Although Sunday started out as a beautiful day, the meteorologist continued to point his finger at two low pressure areas on the North Atlantic chart; one centered in Newfoundland, the other approaching from the west. The combined effect of these two low pressure systems was bound to influence the area where Task Group Alfa was to conduct extensive operations in connection with ASW duty. The only haven for the *Valley* was many miles to the south in the sub-tropics, a distance so great that it was out of the question. Before too many hours, the *Valley* could expect a real blow. The combined storms were to affect ships throughout most of the North Atlantic.

In the afternoon, the submarine USS *Cubera* (SS 347) came alongside, bringing mail and movie film. (See page 25 of this issue). *Cubera* also returned a machinist's mate who had been highlined to them during the morning watch, to do a repair job.

AT THE SAME TIME, VS-36 launched all aircraft, taking full advantage of good visibility and a relatively steady deck. There were CarQuals for many new pilots of the air group, and operational exercises continued throughout the afternoon and into the night until the sky grew too foreboding, and the planes were recalled.

It was well past midnight when the last of the ADs and S2Fs were safely recovered and lowered into the hangar deck. Because of lack of space below, nine S2Fs had to be secured topside.

Oleo struts were bled, and extra tie-downs secured in preparation for the approaching storm. Ballistic hatches were dogged down; strongbacks rigged behind hangar deck roller curtain doors; and loose gear lashed throughout the ship. To guard the planes remaining on deck against possible solid water, palisades were installed next to the island.

Late that night visibility diminished, and the wind, which had sent the temperature below freezing, had backed to 270°, and piped 30, 40 and 50 knots.

At the time, *Valley Forge* was on a 308° heading, and with a 10-knot speed. Main injection temperature leaped to 62°, evidence of the Gulf Stream.

BY DAYBREAK, the seas had risen to 20-25 feet, and the ship had to be turned downwind to 125° to avoid green water forward. A following sea now forced *Valley* to pitch heavily, and her joiner bulkheads to work and creak noisily.

Thick clouds of snow, driven horizontally, struck the island structure like a sand blast, gaining hold in crevices along planking seams. It would form a thin blanket over the flight deck, only to be swept clean with the next gust. When these flakes contacted the warm sea water, banks of dense fog would form over the surface, lowering visibility.

Earlier in the midwatch, a comber had struck the starboard quarter and had carried away two punts from the boat well, sheared off the after boat boom, and then smashed both hangar deck roller curtain doors from their tracks.

Sea water, which had entered the

—Down in the 'Valley'

hangar deck, sloshed from one side to the other, trailed by a pattern of glistening puddles in the tie-down fittings and then ended in the number one elevator pit. Damage control parties manned their stations, where they made emergency repairs as needed.

The destroyer screen had been dispersed and each ship operated independently beyond visible distances. They, too, were having their troubles. USS *Rich* (DDE 820) reported popped rivets and cracks in her expansion joints.

The seas became higher and higher, but *Valley* did not lift fast enough or high enough, and solid water broke over the taffrail.

SERVING DINNER that evening was a difficult chore for the stewards. Food was spilled and stacks of dishes smashed in the pantry.

By movie time, the barometer reached 29.6 inches. The wind had hit 72 knots through clusters of radar antenna, and drowned the whistle blasts that emerged at clocked intervals. The seas ranged from 50 to 60 feet, and *Valley Forge* pitched more than 85 feet.

To maintain steering control against the following seas, starboard turbines were throttled to 90 shaft rpm, and the port screws eased to 50 rpm. With each heave the propellers broke surface and raced.

All hands were repeatedly warned to keep clear of the flight deck, catwalks and all weather decks.

At 2100, as the third reel of a Danny Kaye movie was being shown in the wardroom, the ship rolled violently to port, then paused at 22°. There was a slow vertical tremor as though the ship was riding over a series of timbers. We braced our chairs against any stationary object we could find. There was a crash in the pantry. The movie

JAW BREAKER—Power of the storm-whipped sea is clearly shown by bow damage to *USS Valley Forge* (CVS 45).

projector moved in awkward jumps toward the edge of the table. The operator lunged just in time to rescue it. The bridge announced that the forward end of the flight deck had been carried away.

DURING THE PRECEDING HOUR, CIC had spotted a merchantman to be approaching on a near collison course. When within 4000 yards on the port bow, the ship took evasive action. To fall off to the merchantman's stern, starboard engines were ordered ahead full and the port engines back full, with left full rudder. However, the ship did not respond. The port engines were then also ordered ahead full, and the rudder shifted to right full. *Valley Forge* came about slowly, then fell into the trough, broached to. With the sea now on the starboard quarter, her lee side went down.

Just then, a green sea broke over the flight deck and ripped a section of the port catwalk, hurling it across the catapults. Before the ship could recover from the blow, a second and much larger green sea struck. The port side of the flight deck, unable to withstand the second blow, gave way and an area extending 70 feet aft broke off in two unequal sections.

The larger section, partly sheared off, held fast to the deck even though bent down. The smaller section, containing the port catapult track, was severed completely and hung by an unparted catapult cable and a bundle of electrical conduits. This section swayed freely, pounding the ship's side with each roll. It punctured the hull plating, exposing a stateroom, occupants and all.

Meanwhile, strong gasoline fumes were detected in the hangar deck. Number three elevator was lowered to provide ventilation during the search for the source of the fumes.

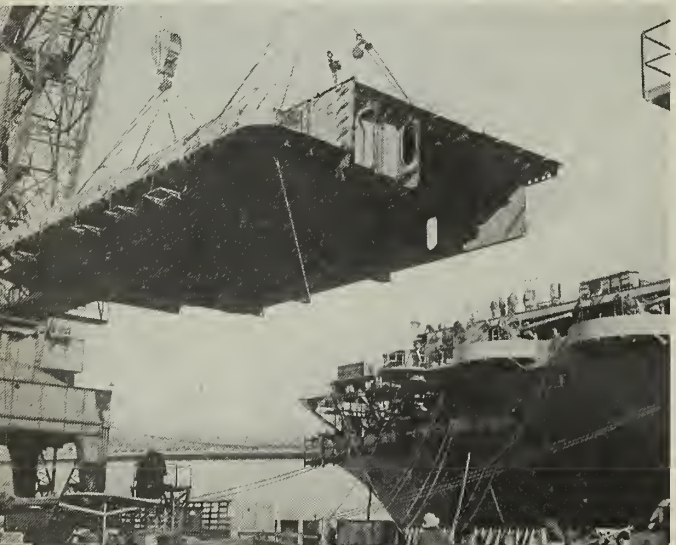
There was some question as to whether or not the constant pounding of the smaller section would eventually part the cables. If this should happen, the bare ends of the wires could start fires, particularly in the presence of gas fumes. It was decided not to cut the section adrift and to trust the strength of the cables until daybreak.

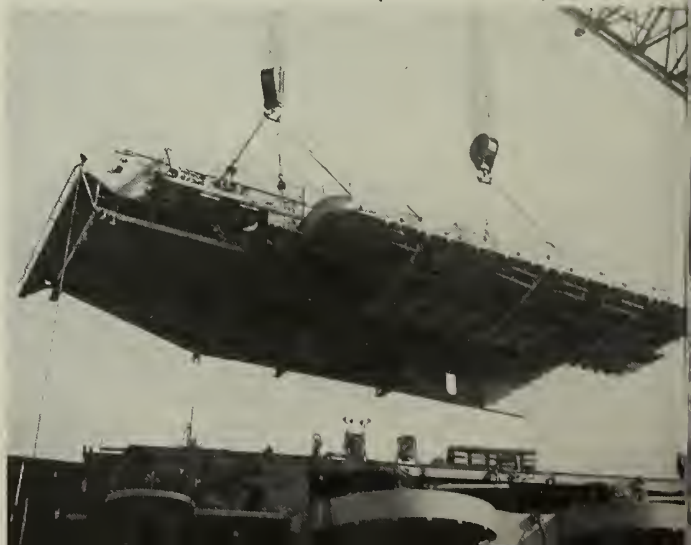
WHEN THE ORIGIN of the fumes was traced to fuel tank vents of the aircraft, about 10 gallons were drained from each tank. For further safety, power supplying the forward area was secured and evacuation of all compartments forward of frame 15 was ordered.

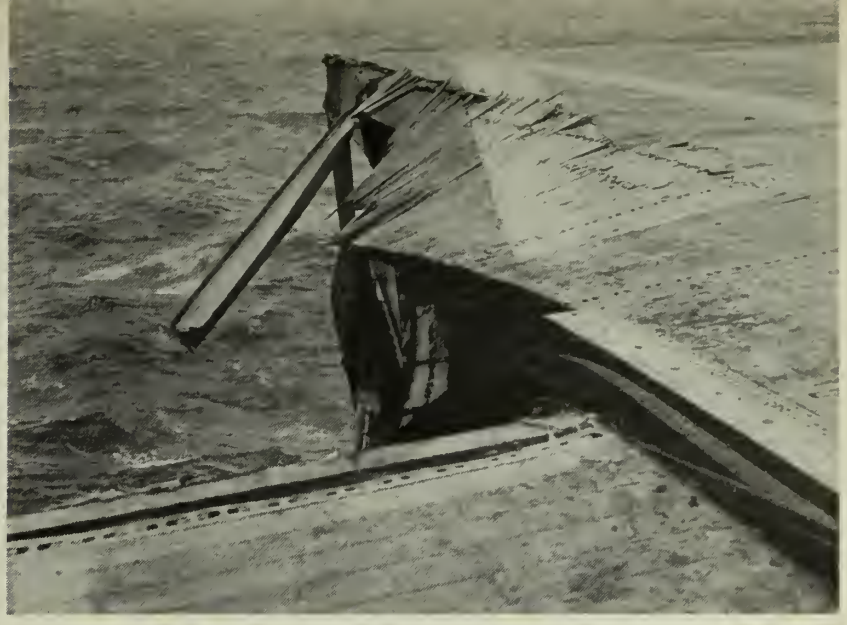
Within minutes, this area was extended to frame 25 and then to frame 55. It included berthing areas and wardroom country.

Those who were berthed in evacuation areas scampered to their rooms

SWITCHING AROUND—Flight deck section from *USS Franklin* (CVS 13) is lowered into place on *Valley Forge*.







GREEN SEA broke over *Valley's* deck ripping loose an area 70 feet long from the carrier's port side.

in the darkness to salvage a few personal belongings before abandoning the area. A pitch black stateroom, with an unsteady deck and bulkheads groaning and popping was an eerie place.

Using a pencil flashlight to find the way, I grabbed a foul weather jacket and a blanket, then headed aft to the log room.

The wardroom was a sight to behold. Suspended from the overhead were three or four battle lanterns which cast cones of white light on the wardroom green cloth. Upset coffee cups and ash trays were scattered everywhere. With the ventilators secured, the air was thick but the card games continued.

Tuesday morning, the storm showed no signs of abating. Deck watches checked the security of planes and equipment. A daylight appraisal showed that the damage was much greater than that seen in the dark. The forward end of the flight deck was distorted to such an extent that the starboard catapult track appeared to be misaligned and number one elevator jammed in place. From a forward compartment, we could see buckled plates and heavy steel beams twisted beyond recognition.

With daylight, the catapult cable and conduits were cut and the dangling smaller section of the flight deck cast adrift.

THURSDAY MORNING, when the fury of the storm had abated and the wind diminished to 35 knots, tales grew taller. As with any storm, the maximum wind velocity and the roll became points of bitter controversy. An unnamed chief swore that the clinometer in main engine control had pointed to 40°, and a seaman insisted that the anemometer showed signs of being carried away.

Valley Forge skirted along the lee of Bermuda and idled in a northwesterly direction awaiting further orders from COMNAVAIRLANT as to her disposition.

Then came a dispatch ". . . proceed to New York Naval Shipyard for repairs . . ." It was to be an indirect route. Making deck runs, the squadrons took off for Norfolk. *Valley* then headed for Hampton Roads to disembark the flag, unload ammunition and aviation gasoline.

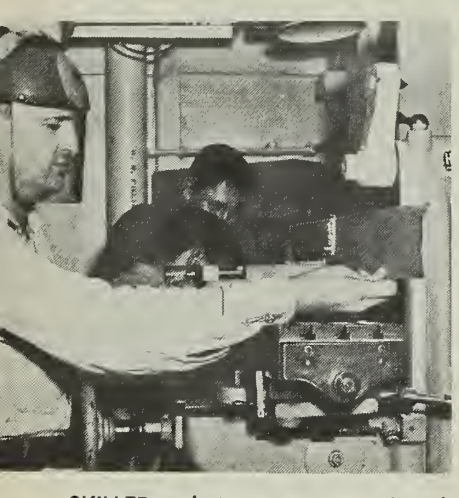
At Bayonne, N. J., the mast was unstepped so that Brooklyn's two bridges could be cleared before entering the shipyard.

—LCDR Edward D. Maissian, USNR.

(In no time at all, Valley Forge *was back on duty, the incident described here being relegated to its proper spot by one typical crew member who passed it off lightly as a "damned rough ride.")*

BACK TOGETHER—*Valley* reported to New York Naval Shipyard where yard workers made her shipshape again.

'E' EXPERT — Internal Combustion Engine Repair Ship USS *Tutuila* (ARG 4) tends brood at Charleston, S. C.



We'll Fix it!

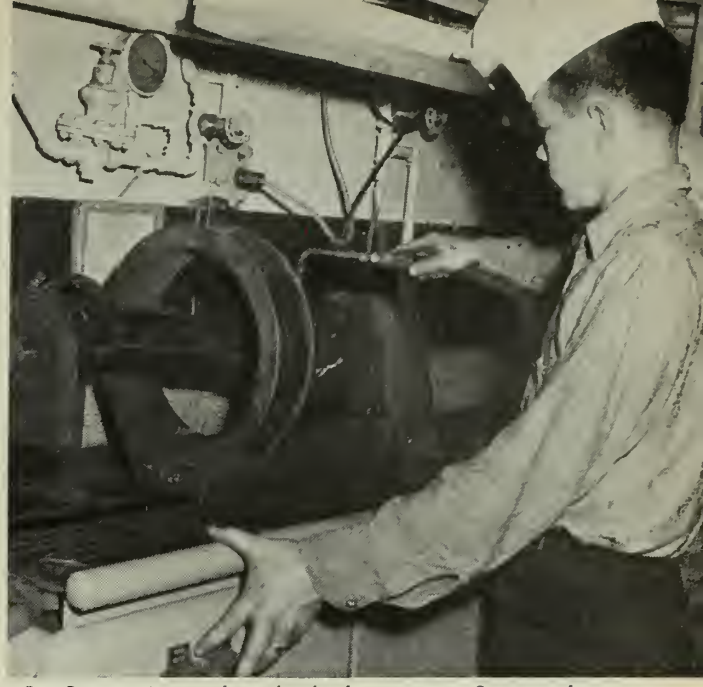
THE PRIZE-WINNING internal combustion engine repair ship USS *Tutuila* (ARG 4) has apparently found a way to cram more than 24 hours into every work day.

That would seem to be the only way to explain the work-horse Atlantic Fleet repair ship's spectacular performance over the past three years.

Over that three-year span the veteran floating shipyard has performed a majority of the repair work on diesel-driven ships of the Amphibious, Mine and Service Forces of the Atlantic Fleet—and managed to win the annual "E" for battle efficiency in her class all three years in the bargain.

The "E" awards, presented each fiscal year and fiercely contested for by all units of the Fleet, are based on all phases of battle efficiency and operational readiness, including gunnery, navigation, damage control and communications. Excellence in

SKILLED technicians man *Tutuila's* shops. *Above:* Milling plastic. *Below Left:* Machining a bushing. *Rt:* Clock is repaired.



SHOP TALK—Binoculars are squared away in optical shop. *Rt:* Connecting rod is checked on magnaflux machine.

supply and administrative procedures, solution of battle problems and engineering trials also enter in to the over-all scoring.

Five straight such "E" awards, incidentally, entitle a ship to a coveted gold "E," a goal which seems to be well within reach of *Tutuila's* hard-working, talented crew.

A large percentage of *Tutuila's* 400 enlisted men are skilled petty officers whose highly technical ratings are necessary to perform intricate repairs on internal combustion engines.

It might be supposed that these technicians would be content to carry out their primary mission—repair—in an able and efficient fashion and let it go at that. From the record of the past three years, however, it's evident that there's nothing "auxiliary" about this auxiliary ship's battle readiness.

Heart and soul of *Tutuila,* of course, is her repair department, equipped to handle repair problems ranging from giant diesel engines to tiny gauges and meters. More than half the crew works in the repair department's 16 shops.

The internal combustion engine shop comprises the main battery of *Tutuila's* repair facilities. Others are the sheet metal, shipfitting, pipe, carpenter, machine, refrigeration, engraving, foundry, optical, watch repair, print, typewriter, diving and salvage, electrical, electronic and gyro shops.

During the first quarter of fiscal 1959, *Tutuila's* repair department racked up more than 52,000 man-hours of labor on a multitude of Fleet and district craft. It is estimated that a comparable amount of repair, performed at a naval shipyard or commercial facility and based on current labor and material rates, would have cost in excess of $400,000.

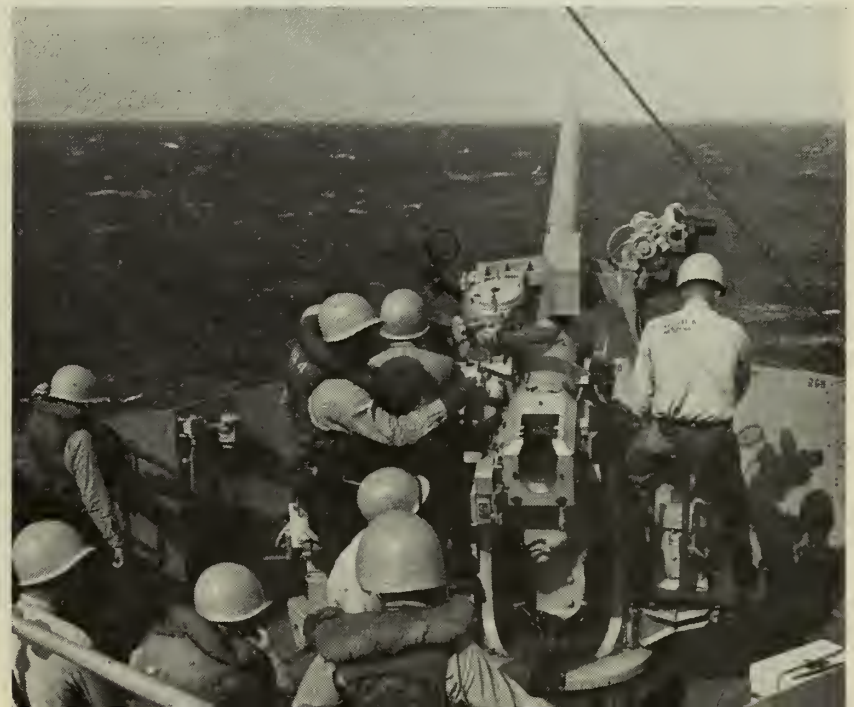
Tutuila hasn't always been the pride and joy of the Atlantic Fleet's repair ship force—she occupied that role in the Pacific during World War II. Built and launched as the Liberty ship *Arthur P. Gorman,* she was converted into a repair ship early in 1944, taking her new name from an island in the Samoan group.

Tutuila reached the Pacific in August 1944, and in the one remaining year of the war worked a back-breaking, round-the-clock schedule, making successful repairs to more than 1800 U. S. and allied naval and merchant ships.

Mothballed in the Texas Reserve Fleet in 1946, she returned to active duty in 1951, and, home-ported at Norfolk, has been COMSERVLANT'S ace "Mr. Fixit" ever since.

—Jerry McConnell, JO1, USN

TUTUILA'S CREW proved ready by racking up the Battle Efficiency 'E.'



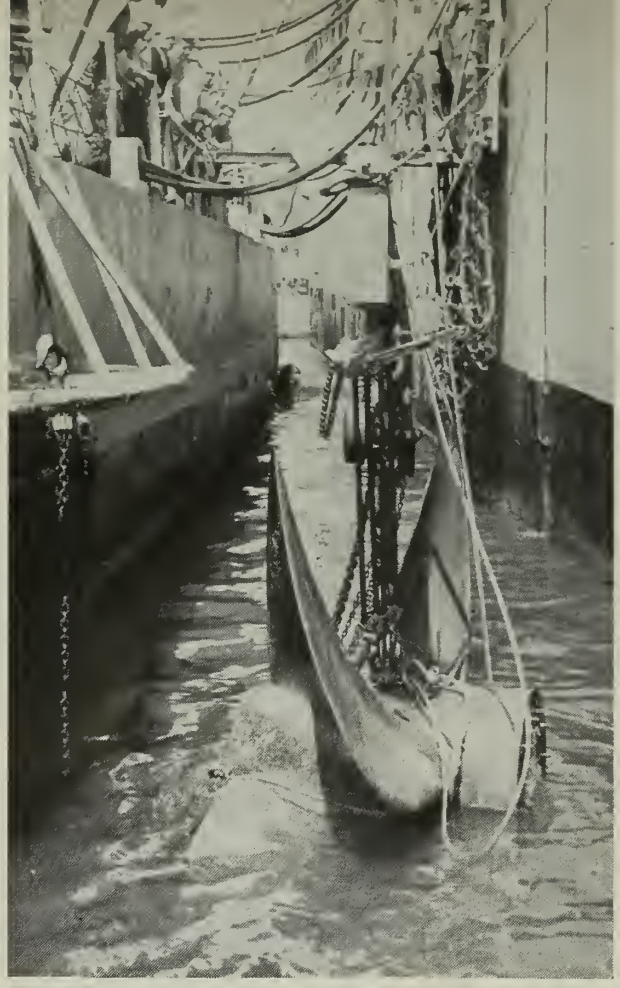
A New Prop

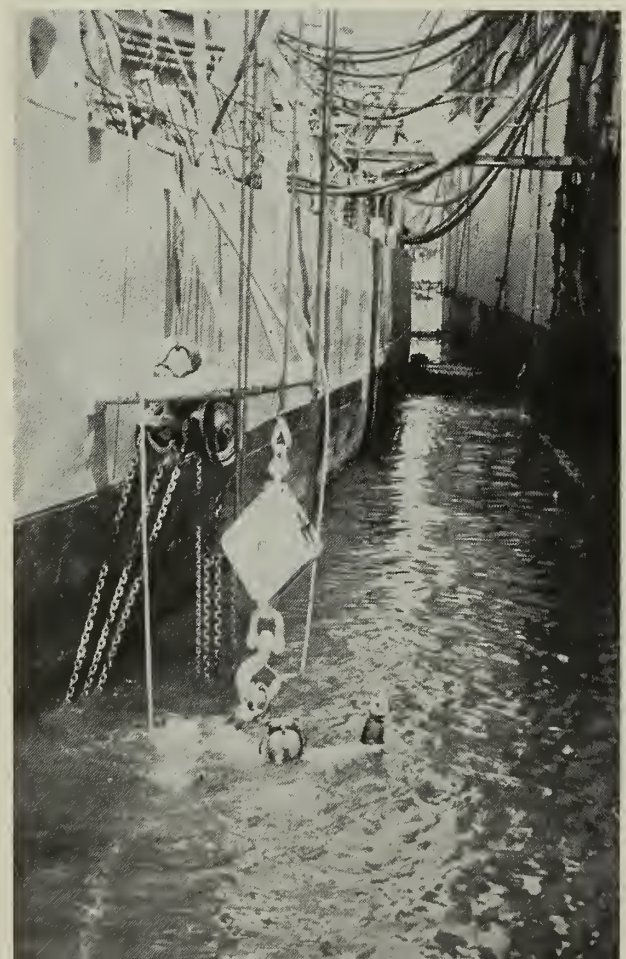
THE DESTROYER TENDER USS *Frontier* (AD 25), based at Long Beach, Calif., undertook the tough task of changing a propeller of the destroyer USS *Mansfield* (DD 728), while the DD was alongside. This type of job is usually performed in the drydock of a shipyard. *Mansfield's* propellers weigh more than nine tons each, measure 12 feet, eight inches between blade tips.

A five-foot wrench, moved by tackle, was needed to unscrew the giant nut on the end of the propeller shaft. Then the propeller was jarred loose with a small explosive charge. Chain hoists, cables, and a boom were used to hoist the faulty propeller aboard *Frontier* and to lower the new one to *Mansfield*. The job took plenty of technical know-how by the crew, plus some 116 hours of underwater work by the ship's divers.

Five divers took part in the underwater phase of the job. From the time *Frontier* was assigned the task until she completed it, only a little more than a week elapsed. Another satisfied customer was as good as new.

Upper right: Divers start down to investigate. *Lower right:* The Faulty 18,500-pound propeller is taken aboard *Frontier*. *Upper left:* Replacement propeller is lowered from tender. *Lower left:* Mission accomplished.





Hull Divers

NEWSPAPERS, magazines, movies and television have made many people aware of the Navy's Underwater Demolition (UDT) and Explosive Ordnance Disposal (EOD) Teams.

Not so often heard of are the *hull repair divers* on destroyer tenders such as USS *Bryce Canyon* (AD 36). Her diving gang, led by Chief Warrant Officer A. C. Von Behren, USN, has tackled everything from replacing damaged propellers on a destroyer to recovering an auto that had run off a bridge into 60 feet of water.

The gang is made up of one first and five second class divers who are qualified to work with deep-sea and shallow-water diving gear at depths of 150 feet. All are accomplished Scuba divers. They are also jacks-of-all-trades, with the qualifications of boatswain's mates, shipfitters and machinery repairmen—qualifications which are essential in the underwater hull inspection and repair work they perform.

Top Left: Diver is rigged for work. *Top right:* Rubber-suited divers check air valve. *Right:* Diver goes below to check hull. *Bottom Right: USS Bryce Canyon* hull-repair divers pose for photo. *Bottom Left:* Scuba diver is readied for a tough and delicate job.

The Mighty Midgets

THE MINESWEEPING BOATS of MINRON 10 in the Atlantic Fleet Mine Force are manned by some of the top enlisted men in the Navy. The men have to be outstanding in their field. Their job is just as complex, just as exacting, as demanding of seamanship and leadership as any seagoing job in the Navy. It's up to the midget sweepers to take the lead in sweeping a path through mined waters so that the Fleet can follow a safe channel to its objective.

There are three classes of minesweepers now in Fleet service—the Ocean Minesweeper (MSO), Coastal Minesweeper (MSC) and the 57-foot wooden-hull Minesweeping Boats (MSBs). All three types are capable of sweeping or activating most of the known types of mines. This means that the MSB must have the same capabilities as the larger type sweeper but adapted to its own smaller scale.

The primary mission of the MSB is the shallow-water sweep—harbor, inland channel and assault areas.

MSBs OF MINRON 10 move out to take up their designated positions to conduct routine minesweeping exercises somewhere off the Atlantic Coast.

THE CAPTAIN of a million-dollar MSB (it costs less than many airplanes) is a carefully selected Chief Petty Officer. His second in command is a boatswain's mate. The remainder of the crew: one electrician's mate, an enginеman, and three seamen. About all the skipper and crew have to do is study the requirements of a pending operation, carry on the training necessary to assure successful completion, get their boat underway, form up with the division, stream sweep gear, drop dan buoys to mark the clear channel, mark it on the chart, and recover the sweep gear after a successful sweep.

That brief summary takes only a few words to state. But each section of it requires many hours of hard work and calls upon the individual ingenuity, initiative and capability of every member of the crew.

Take, for example, the case of one of these crew members—Parry Cook, EM2, aboard *MSB-29*. Parry's hatrack (if he had one) would need five hooks—his is a five-hat job.

Since he's an *electrician's mate*, the boat's electrical plant is his main concern. But Cook also minds the navigating log as a *quartermaster*, the flag hoists as a *signalman*, the radar apparatus as a *radarman*, and the communications as a *radioman*.

Asked how long it took him to learn all these jobs, he modestly replied: "Different men adapt in different ways. Some learn routines faster than others. But the average time is about two months."

THE BOATS normally operate at a Mine Sub-Division level. The MSB Squadron of the Atlantic Fleet Mine Force is divided into two divisions and each division into sections or sub-divisions. Mine Sub-Division Commanders are selected from the most outstanding Chief Boatswain's Mates and Chief Quartermasters in the squadron.

These billets, incidentally, have been recommended as an E-9 by the Squadron Commander because of the heavy responsibility and trust placed on the "Section Chief."

To appreciate this responsibility and trust, you should be familiar with the requirements of the position and nature of MSBs themselves. The Section Chief's perform all the administrative and training functions of a Division Commander. They function directly under the Squadron Operations Officer and the Logistics Officer.

In port, Section Chiefs schedule training exercises, plan operations, and participate in the training programs. Each Section Chief plans the operations or employment of his boats, scheduling each phase of boat activity from tender availabilities to underway competitive exercises. He is responsible for the level of training of each of the boat crews as well as material condition of the boats.

At sea, Sub-Division Commanders take charge of their divisions as Officer in Tactical Command underway, to conduct minesweeping exercises. During competitive exercises and operational readiness inspections they assist the observing or inspecting officer. This broad picture of the administrative and organizational aspects of the Sub-Division Commander's billet is only a part of the whole because the training of the Section Chief begins when he is assigned as Chief Petty Officer-in-Charge of an MSB.

THE IMPORTANCE of extensive training is fully recognized and positively dealt with at the command level of the Squadron. Training goes on any time the boat is underway. In addition, a daily period of intensive instruction is set aside to cover specific areas in the functioning of the MSB.

The entire crew gets experience in all phases of the boat operation —communications, navigation, engineering and watch-standing.

Each man is qualified to light off the engines and get the boat underway. Each must be well-qualified in his rating group, and the majority acquire professional experience usually considered beyond the scope of normal duties.

To utilize this plant and crew effectively, the CPO in charge must have a comprehensive knowledge of operational tactics, voice and visual communications, Rules of the Road, shiphandling, navigation, utilization of electronics, shipboard engineering, and the theories and methods of effective mine countermeasures against all types of mines—moored, pressure, magnetic and acoustic. But to have this knowledge is not enough. He must also have the ability to apply it.

In Mine Squadron Ten, the challenge of command is extended to the enlisted petty officer. The challenge, of course, is to become commander of his own boat. Only through superior performance of duty can he become one of MinRon 10 Section Chiefs—the Navy's most junior Division Commanders.

ALL SQUARED AWAY — Inspections are part of routine for MSB skippers.

OVER THE SIDE — J. M. Herrin, BMC, former skipper of MSB-28, receives a farewell salute from his fellow chiefs during his retirement ceremony.

On Barrier Atlantic

"WE HIT 50 DEGREES on that roll, sir!" comments the steers man to the officer of the deck, meanwhile, noting his desperate arm-lock on the starboard pelorus.

The high-pitched wail of the pilothouse telephone signals another report: "Sir, your relief will be a little late. Says he got a couple of plates of eggs in his lap at the breakfast table."

Hurricane? Extratropical cyclone? No—just another morning with a ship of the Surface Barrier, Atlantic. This is USS *Calcaterra* (DER 390), a typical radar picket escort vessel of the Destroyer Force.

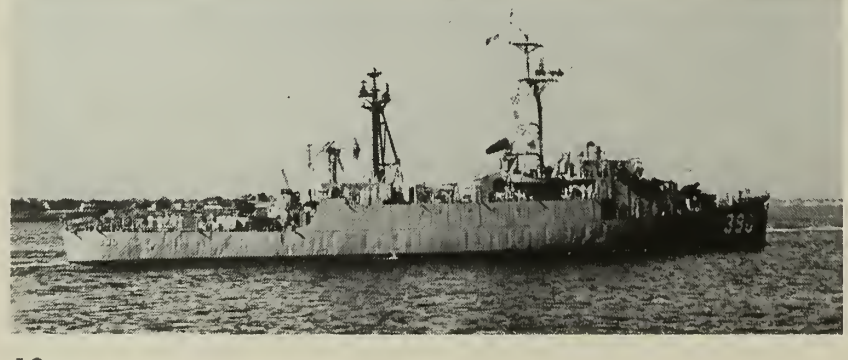
With her qualities of endurance, exceptional stability and general seaworthiness, this small adventurer plows gamely along, oblivious of the North Atlantic at its worst. Throughout the 6000 miles of steaming on each patrol, she carries out her mission of protecting the United States against surprise air attack.

These extensively converted and modernized World War II DEs may occasionally be seen at Newport, R. I., where they mingle with the sleek grey destoyers like poor relations visiting their rich cousins. Their enclosed main deck areas give them a peculiar profile, compared to that of the DDs.

Although there are 18 DERs with Escort Squadrons 16 and 18 at Newport, and more at Pearl Harbor, their job is specialized, and little is known about them. To find out where a DER goes and what she does to earn her place in the Fleet, let's go with *Calcaterra* as she steams smartly out of harbor to make a typical picket in the North Atlantic.

Calcaterra is not the greyhound her cousins of the Destroyer Force claim to be. With four diesel engines for power, her "flat out" speed is a lot less. However, for the job she is designed to do, her speed is more than adequate, and her engines drive her thousands of miles without refueling.

PECULIAR PROFILE—Enclosed main deck gives DER's unusual appearance.



WHAT CALCATERRA lacks in forward speed she more than makes up in motion from side-to-side. Rolling 40 degrees or more from one side to the other every three seconds is routine. And, heavy rolls soon become as much a part of the picketeer's life as "Turn to" and pinochle.

After being tossed to the deck in the middle of the night a few times, a man soon acquires the knack of sleeping soundly while he grimly hangs on to his bunk like a cat in a waving treetop. During meals he needs the skill of a circus juggler to balance a tray, his silverware and a cup of coffee with one hand while he desperately anchors himself with the other. When he can take such things as these in stride, he becomes a real picketeer.

When she leaves port, *Calcaterra* commences what might be called a nautical version of musical chairs. Her first stop is Argentia, Newfoundland, and dawn finds her in Placentia Sound. Here, she fills up with diesel oil in preparation for

the many days at sea that lie ahead.

After topping off and being briefed by Commander Surface Barrier, Argentia, she is ready to get on with the designed mission of the DERs—manning the Surface Barrier, which stretches from the chilly fog and ice of the Grand Banks to the sunny blue waters around the Azores. The barrier is patrolled by several DERs, and additional support is provided by the AEW (Airborne Early Warning) aircraft which maintain constant air surveillance up and down the line. (AEW people have sometimes claimed it is the DERs which lend "additional support," but DER men of course brand this as untrue.)

THIS TEAM of ships and aircraft provides an efficient radar coverage which extends the Distant Early Warning Line 1000 miles seaward to preclude the possibility of a successful enemy end-run around our land-based search network. Westbound aircraft which penetrate the barrier are immediately reported, via a rapid communciations system, to North American Air Defense Command (NORAD), where the information is checked against known flight plans, so that any unidentified contacts can be covered by land-based interceptors while still far out at sea. Thus, openings for possible surprise raids on U. S. cities are kept to a minimum.

The game of musical chairs begins when *Calcaterra* departs Argentia and sets course along the barrier. On signal, all ships down the line proceed southward. *Calcaterra* then takes her place at the end of the line and the leading DER drops out of the game and heads for home—picket and mission completed.

It takes a while to get used to life in a DER on picket station. A first-picket "recruit" who has just found his sea legs is likely to remark, "Nobody—but *nobody*—lives like this!"

The ship operates completely independent of other units, often lying to in good weather. The OOD and the bridge watch have little more than an occasional passing ship or an all hands drill to keep them occupied. "Keeping station" is not the tense and exacting operation a destroyer division goes through, but merely a matter of staying within several miles of a point of the chart. "Stationing speed" in a DER means ahead one-third on one engine—perhaps four knots. The tempo on the bridge approximates "dead slow," and training problems in Fast Carrier Task Force tactics must be synthesized to prepare officers for future assignments and operations.

WHILE THE BRIDGE LOOKOUTS may spend their days scanning an empty horizon, the electronic eyes of the Operations Department maintain a more fruitful search. With tireless sweeps, two air search radar units detect aircraft far beyond the horizon. In CIC, contacts are tracked on a huge plotting board, and those that penetrate the barrier are immediately reported on special radio circuits. The initial contact reports are received at NORAD headquarters only minutes after the first blip has appeared on the scope.

To conduct such operations, a fantastic amount of modern electronic equipment is crammed into the small space of a DER, and the ship's electronic technicians are almost constantly on the go between the forest of antennas topside and the maze of tubes and wires below. Servicing this equipment, in which a thousand circuits may require attention for optimum performance, calls not only for skill and devotion, but also for the ability to go long hours without sleep to finish a job.

GOING UP — Rough north Atlantic waters put lots of rock and roll into the salty life of a Picketeer.

As each succeeding DER leaves Argentia, *Calcaterra* moves one space southward, until, at last, her turn comes to set course back to Newport for repairs, training—and, of course, liberty, recreation and a few precious days with families.

Before long, *Calcaterra* will be back—playing musical chairs once more in a game which is definitely for keeps.

—ENS Thomas V. Moore, USNR.

WINTER COMES EARLY—Winds and storms pile up layers of ice covering decks and superstructure, keeping crew members busy with picks and shovels.

The Personnel Men

What do you know about the jobs of the other ratings in your ship or station? You know what your responsibilities are, and probably those of many of the men who work with you, but what about the atomic disbursing clerk, or the commissary electronics specialist, or the supersonic sonarman? Probably you're not so sure (and neither are we).

In past issues ALL HANDS *has reported on the jobs of numerous ratings, such as the deck group, the black gang, Seabees, aviation categories, etc. In recent issues there has been some discussion of the job PNs do, so it seemed appropriate to do a little investigation. There'll be more reports on other specialities, pointing up how important and related to you are the jobs of your shipmates.*

THERE IS NO PROBLEM to the Navy's men and women which involves naval personnel administration that some Personnel Man does not at some time touch upon.

Just by thumbing through the pages of your enlisted service record you'll find that close to every move you make (officially, that is) is handled in one way or another by a Personnel Man.

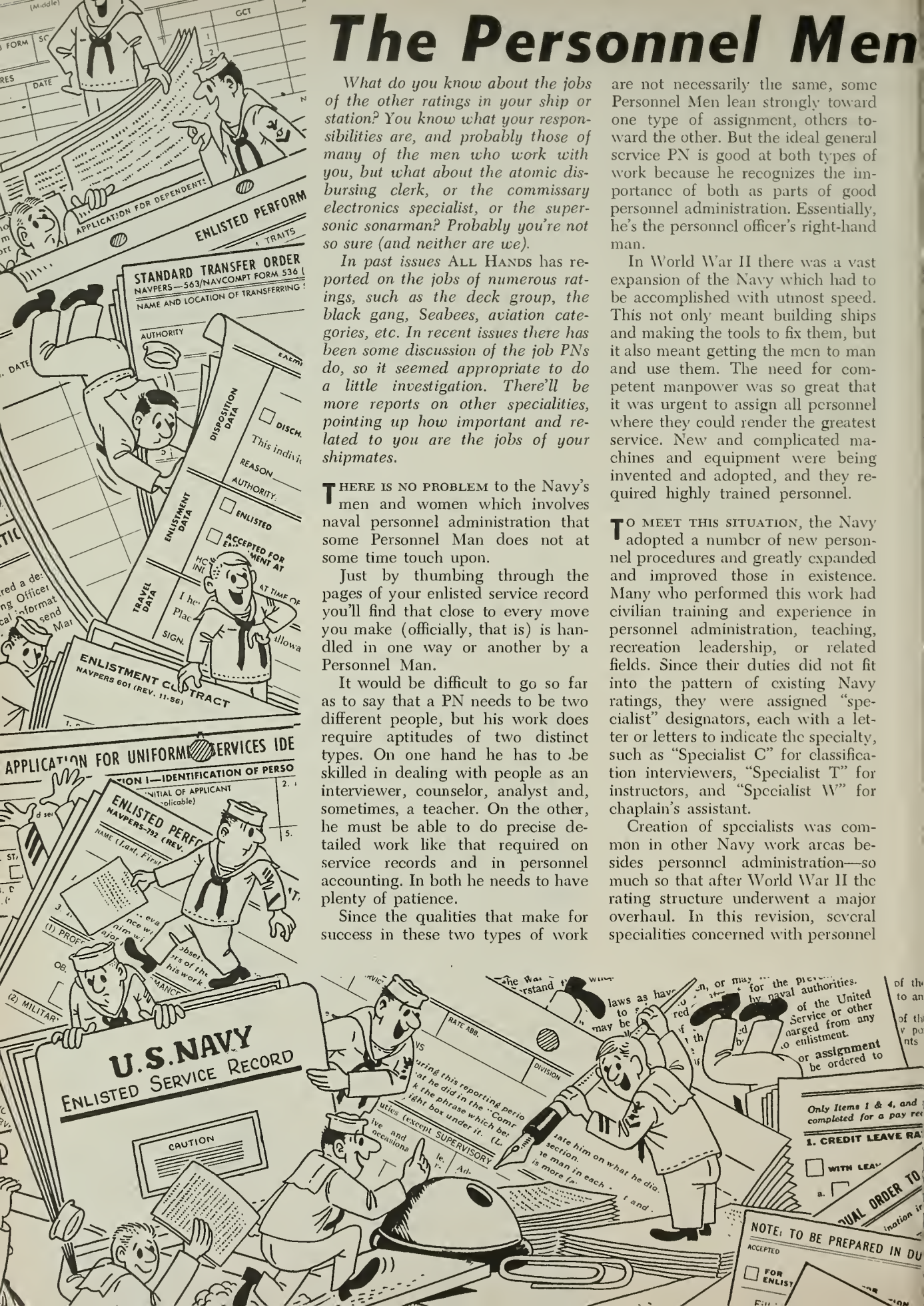
It would be difficult to go so far as to say that a PN needs to be two different people, but his work does require aptitudes of two distinct types. On one hand he has to be skilled in dealing with people as an interviewer, counselor, analyst and, sometimes, a teacher. On the other, he must be able to do precise detailed work like that required on service records and in personnel accounting. In both he needs to have plenty of patience.

Since the qualities that make for success in these two types of work are not necessarily the same, some Personnel Men lean strongly toward one type of assignment, others toward the other. But the ideal general service PN is good at both types of work because he recognizes the importance of both as parts of good personnel administration. Essentially, he's the personnel officer's right-hand man.

In World War II there was a vast expansion of the Navy which had to be accomplished with utmost speed. This not only meant building ships and making the tools to fix them, but it also meant getting the men to man and use them. The need for competent manpower was so great that it was urgent to assign all personnel where they could render the greatest service. New and complicated machines and equipment were being invented and adopted, and they required highly trained personnel.

TO MEET THIS SITUATION, the Navy adopted a number of new personnel procedures and greatly expanded and improved those in existence. Many who performed this work had civilian training and experience in personnel administration, teaching, recreation leadership, or related fields. Since their duties did not fit into the pattern of existing Navy ratings, they were assigned "specialist" designators, each with a letter or letters to indicate the specialty, such as "Specialist C" for classification interviewers, "Specialist T" for instructors, and "Specialist W" for chaplain's assistant.

Creation of specialists was common in other Navy work areas besides personnel administration—so much so that after World War II the rating structure underwent a major overhaul. In this revision, several specialities concerned with personnel



— Navy's Personality Experts

administration were grouped in a new rating designated Personnel Man. This, like a great many other comparatively new ratings, was born on 2 Apr 1948. Included in the duties of a PN was personnel record keeping, formerly a yeoman's duty.

After 11 years, there is still reluctance in some quarters to accept the Personnel Man rating for what it is and to realize the tremendous benefits to be gained from its proper utilization. But in these 11 years, personnel administration has become even more complex and the need for competent Personnel Men even greater. The original reason for creation of the PN ratings—that there was no need to try to train personnel to be both YNs and PNs—is more valid now than ever before.

WHEREVER MEN GO in the Navy and whatever they do, from the day of enlistment to final separation, records must be kept of their whereabouts, the billets to which assigned, advancements and awards, their punishments, and other matters affecting them personally. These records, in complete and accurate form, not only are needed for the efficient day-to-day operation of the Navy, but are often vitally important to the man's welfare.

Personnel Men in the office of the executive officer have charge of all the records of personnel on board. They keep service records up to date, prepare personnel accounting diaries and cards, make up watch, quarter and station bills, keep records of leave, handle liberty cards, musters, ration forms, and other papers. Senior PNs in the executive officer's office supervise, interview personnel with problems, and perform other duties requiring advanced knowledge, training and experience.

PN strikers and newly rated PNs are likely to be assigned to the general office duties of typing, filing, serving as receptionists, and filling out standard forms according to instruction. All of this is training for some of the bigger jobs that will be coming along as they advance.

The first experience a PN striker or PN3 encounters usually comes in connection with work on service records. Page 4 of each man's service record, on which is recorded the history of his Navy occupation and training, must be reviewed from time to time and brought up to date. This includes, among other things, the recording of new or additional NECs to indicate the specialties in which a man is best qualified.

In September 1958, the Class "A" Personnel Man Schools at NTCs Bainbridge and San Diego were disestablished as part of a necessary cut-back of formal training. On-the-job-training is now the only means of procuring personnel for the PN rating. For those interested in striking for the PN rating here are some of the basic qualifications: Have the desire to work with people; be above average in the ability to learn and think; possess a high degree of clerical aptitude.

Some highly useful qualifications are school courses in typewriting, public speaking and office practice. Experience in personnel work, guidance and counseling, teaching or welfare and recreation supervision is also helpful.

TO THE INDIVIDUAL who feels he has the necessary qualification along with the desire to become a Personnel Man, here's a little test you can take. Imagine that you could change places with the PN who supplied you with various information when you reported aboard your duty station. What type of service did you receive? Was it prompt and efficient? Would you, as the PN, have been willing to go just a little further to satisfy the inquirer? Place yourself in this position, because—if you do choose this profession—as you advance in the Personnel Man rating, you will be called upon to perform this service for people. Intelligent and prompt action means a lot to the man who is sweating out a request or problem.

Experienced PNs who have had special training are assigned to Recruit Training Centers, Receiving Stations, Naval District Headquarters and even to overseas activities, to mention only a few. These Personnel Men, who are identified as classification interviewers and are assigned an NEC of PN-2612, interview personnel, test, score tests and interpret the score. They also interview recruits, counsel them in their choice of a Navy career and make recommendations regarding their school and duty assignments. They also prepare the Enlisted Classification Record (page 3) which is a part of each enlisted person's service record and of direct value to those concerned with the placement of enlisted personnel.

This record is a concise summary of each man's test scores, civilian education and training, personal interests, physical qualifications, and civilian occupation experience before enlistment in the Navy. It also includes the PN's recommendations for assignment to service schools or shipboard duties. Its use in making initial shipboard assignments of new personnel shows it pays big dividends in morale and duty performance.

CLASSIFICATION is an ever continuing process. It does not stop at the recruit level and lie dormant. The "right man in the right job" is the theme—regardless of duty station, shipboard or shore. And it's the PN's job to see that all of the various tools such as the Enlisted Classification Record (page 3) and the *Manual of Navy Enlisted Classifications* are properly employed.

Formal training in the art of classifying is conducted at the Personnel Man, Class C-1, Interviewing and Classification School at the Service School Command, U. S. Naval Training Center, San Diego, Calif. This 8-10 week school, which is open to PNC, PN1 and PN2, has classes convening every four weeks.

Students become familiar with the essential tools and techniques of Navy Personnel and Job Classification in order that they can realize, appreciate and carry out their respective roles in the more effective and efficient utilization of available manpower. While the training and development of interested and skilled classifiers are the prime objectives of the course, a great deal of emphasis is placed on personnel administration in general.

This school also acts as a screening activity evaluating students for specific management engineering and personnel research billets as required and directed by the Chief of Naval Personnel. Advanced courses are available in billet and organizational analysis and work simplification.

Here are some of the personality traits that are developed and encouraged because they are considered requisite for all classifiers:

- A sincere interest in each person interviewed and in the welfare of the Navy.
- An ability to understand the other fellow's point of view.
- An ability to recognize some of the symptoms of maladjustment.
- The buoyancy needed to conduct a whole series of interviews successfully.
- Patience and self control.
- Proper speech characteristics.
- The ability to subordinate personal feelings and prejudice.
- An understanding of the needs of the organization as related to the needs of individuals.

The above traits are considered throughout the course of instruction, and final recommendations to duty assignments at the completion of the courses are affected by these qualities as well as other achievements.

GRADUATES OF THE SCHOOL go to one of the 45 Enlisted Classification Units which operate under the technical control of the chief of Naval Personnel. These are located at naval activities where the number and types of personnel transactions are very high. The majority of these units are located at naval training centers, receiving stations and naval districts, but small units exist at such activities as air training commands, retraining commands and service force personnel offices.

Classifiers are purposely rotated from classification billets to general duty PN billets—for probably the trained classifier's greatest value is at the average ship or station. In many cases he is called upon to assist in work simplification or billet analysis, in screening personnel for school eligibility, in administering tests, interviewing personnel—or any one of a myriad of duties where a skilled personnel technician is worth his weight in gold.

"Working with people is fascinating," (so says the *Personnel Man Third and Second Class Training Course*) "because no two of them are alike. Most of them try your patience sometimes. A few will be downright irritating. On your worst days you may wish you had chosen a career exclusively devoted to nice emotionless machines; you may wonder if the results of your work are worth the effort you're putting out.

"But you'll never be bored. In a job like yours, something new can happen any minute. It usually does."

Personnel Men Play Key Role At Classification Centers

Located at Great Lakes is one of the two Enlisted Classification Centers for male recruits throughout the Navy. (The other is at San Diego, Calif.) A staff of 37 men processes over 200 recruits through Classification daily. It is the mission of the unit to select qualified Navymen to fit the many jobs necessary to maintain the high state of military preparedness needed in these times.

The process of selection begins when a recruit is in his third week of training. Individual classification interviews are given each man by a Personnel Man. The objective is to find the recruit's interests, experience and abilities. expanded over the last 10 years.

The Navyman was once depicted as a tobacco-chewing package of brawn, fighting from sea to shore and back again, with his home a seabag upon his back. The sailor of today is a specialist and a technician, geared to work in the nucleonic, supersonic, electronic Navy.

And the 1959 sailor is carefully selected through a Classification Center for his role in this modern Navy, as commensurate with his background, interest, ability and aptitude. It's the Personnel Man's job to see that the right sailor is in the right job.

Navy Mountain Men

A VOLUNTEER GROUP of Navymen, stationed near the mountainous regions of the Seattle area, stand ready to rush to the aid of airplane crash survivors at a few minutes' notice. The team members, operating out of Sand Point, must be trained and equipped to conduct sustained, independent operations from a base camp in the mountains. This is done under the most adverse weather conditions and over the most rugged terrain which can be anticipated.

Technically skilled in a variety of occupations, the mountaineers are selected and organized from the volunteers to form efficient crews of search and rescue workers. Their training syllabus includes items such as map and compass work, search methods, survival techniques, first aid, and signaling. Lectures and classes provided in cooperation with the Seattle Mountain Rescue Council prepare the teams with theoretical techniques which are then tested in training operations in the mountains.

Fully equipped with everything from ice axes to a portable radio station loaded aboard their special truck, the Navy mountaineers can depart at once from their station to find a crashed plane and take initial rescue action.

Then it's time to saddle packs to their shoulders, break out the snowshoes and skis and start walking. At the close of the first day, the heavier equipment is cached so the crew can continue the search at a more rapid pace.

In order to make a haven for the night, the rescuers scoop a basin out of the snow, make a roof from branches and use snowshoes for a doorway. Before leaving, all cut branches are burned to eliminate a fire hazard during the dry season.

An excellent aviation safety record at Sand Point has fortunately limited most of the team's "rescue missions" to training operations. These are designed to keep the men and their equipment in top shape and in a ready-to-go availability condition.

BASE CAMP—After hiking all day, heavy equipment is cached in tents. Then it's time for a good night march.

INFO IS PASSED—A radio message is transmitted to report team's position.

FAST TIME—With only the necessary equipment to get him through, crew travels light, then takes time out to eat.

A School on This Side of Tomorrow

MIDWAY—136 miles east of the International Date Line — describes its location as "Just this side of tomorrow." Its new Navy dependents' school, which first echoed to the voices of students in November 1957, also fits the description.

Housed in a modern 25-room building, Midway's George Cannon School was planned with children in mind, and everything in it — from textbooks to audio-visual aids — is new.

Before the present school opened, classes met in makeshift quarters, and regular classroom teaching was available only on the elementary level. Students in the upper grades had to be taught through correspondence courses.

Now, however, there's been a big change. For the younger children there are no more makeshifts, and for the older ones there's a real high school.

In the elementary grades the fundamentals of reading, writing and you-know-what are stressed, but the youngsters also get their share of art, music and other cultural courses.

The high school is designed for college preparatory work, with the emphasis on sciences, mathematics, language and social studies. For those students who don't want a straight academic curriculum, commercial courses are offered as elective subjects.

The faculty is composed of teachers who have applied for their positions through the Navy Overseas Employment Office (Pacific) or who are the wives of military personnel stationed on Midway and are qualified teachers. Teachers are selected for their jobs by the school principal, on the basis of the school's needs and the experience and educational

MODERN TOUCH—Navy's George Cannon School on Midway Island is modern in styling on both inside and out.

ON WITH THE LEARNING—First graders receive reading lesson. *Rt:* High School students enjoy science session.

background of the applicant.

Teaching families are especially attractive candidates because of the housing situation on the island. (Excellent quarters are available, but they are few in number.) There are three such families on the faculty of the George Cannon School. One of them, the Dale Millers of Wichita, Kans., includes a trio of teachers—father, mother and son—who all teach in the elementary grades. They have been working as a group for some time. Last year in Alaska, this year on Midway and next year who-knows-where.

For teachers and students alike Midway is an ideal place to live and learn. Not too long ago the surrounding waters were the scene of America's first decisive naval victory of World War II, and even the school's name contains a lesson in recent history. First Lieutenant George Cannon, USMC, died on 7 Dec 1941 while defending the strategically important island against attack. He was mortally wounded by a shellburst on the battery he commanded, but refused medical assistance and continued to return fire from his position. He was awarded the Medal of Honor.

Midway also offers a lesson in geography. Located almost in the center of the Pacific, Midway is made up of Sand and Eastern Islands, which are surrounded by a beautiful reef-encircled lagoon. The weather is a blend of tropical and temperate climates which have few of the faults of either and most of the virtues of both.

For the biology student Midway offers some unusual animal and plant life. It is the home of the famous gooney bird; the fairy, sooty and Hawaiian terns; the booby and frigate birds; the boatswain bird which can fly backwards; and the moaning bird which burrows and nests underground and cries in the night like a tortured human being. The islands are almost blanketed with scaevola and ironwood trees.

In addition to all this, Midway boasts some of the finest beaches in the world for the students to use—after school, of course.

—E. J. Connolley, LTJG, USNR.

MIDWAY LIFE—Students study under ironwood as unperturbed bird nests.

ON THE SEA top Ney Memorial Award winner was *USS Paul Revere* (APA 248). *Left:* Down the line. *Rt:* Good Eating.

How Now Fine Chow

The Naval Communications Facility, Kami Seya, Japan, and USS *Paul Revere* (APA 248), of the Pacific Fleet Amphibious Force, have been judged winners of the All-Navy 1959 Ney Memorial Awards competition—awards which honor the best land and sea messes.

The runner-up award in the afloat category went to USS *Norton Sound* (AVM 1) of the Pacific Fleet Naval Air Force. In the shore mess classification, second place was captured by Naval Air Station, New Orleans.

The two Ney Memorial Award winners topped 38 other nominees rated for their superior food facilities at ship and shore commands throughout the world. They were selected and judged the best from six finalists by an on-the-spot evaluation of food preparation, serving techniques, sanitation and management.

This is the second consecutive year that the Navy's food service personnel have vied for the best mess titles. The 1958 winners were the USS *Franklin D. Roosevelt* (CVA 42) and the Naval Station at Guantanamo Bay, Cuba. As was the case last year, the 1959 Ney Awards were sponsored by the Executive Stewards' and Caterers' Association, a fraternal non-profit organization made up of executives in the fields of food procurement, preparation, management and service.

The Ney Memorial Awards program was established in 1958 by the Secretary of the Navy as a means of giving recognition to those Navy general messes considered as outstanding in food preparation and service. The competition commemorates the late Captain Edward F. Ney, SC, USN, World War II director of the Subsistence Division, Bureau of Supplies and Accounts.

The winners and runners-up in the 1959 food contest will be awarded plaques in tribute to their achievement. Semi-finalists will receive special certificates for their outstanding food performances. Two officers and two enlisted men, representing the USS *Paul Revere* and the Kami Seya general messes respectively, will officially accept the winning plaques as guests of the Executive Stewards' and Caterers' Association at their National Convention in San Diego, California, on August 19.

The USS *Paul Revere* and the Naval Communications Facility, Kami Seya, messes were judged as the Navy's finest by the Ney Memorial Awards Committee, composed of three food experts of the Executive Stewards' and Caterers' Associa-

SECOND PLACE afloat went to mess crew aboad *USS Norton Sound* (AVM 1) and ashore went to NAS New Orleans.

ON THE LAND best mess was by Naval Communications Facility, Kami Seya, Japan. *Below:* Kami Seya fancy touch.

tion and officers representing the Bureau of Naval Personnel, Bureau of Medicine and Surgery, and the Bureau of Supplies and Accounts. Committee members announced they had difficulty in selecting the prize winners because contenders were so evenly matched this year.

The committee reached a unanimous decision after traveling over 14,000 miles by air from 4 to 19 June to make personal checks of service and management at the mess facilities of the six finalists.

Navy messes throughout the world competed with unprecedented activity for the 1959 Ney Award titles. By 1 Apr 1959 each type commander, overseas area and force commander, district commandant and river commandant had selected the most outstanding general mess under his jurisdiction or in his area. During the latter part of May, 40 nominees were thinned out to six finalists—USS *Northampton* (CLC 1), USS *Norton Sound* (AVM 1), USS *Paul Revere* (APA 248), the Naval Air Station at New Orleans, the Naval Air Station at Oceana, and the Naval Communication Facility, Kami Seya, in Japan.

For their outstanding food service performance, the following messes will receive special certificates:

In the afloat category: USS *Conquest, Galveston, Gen. Wm. M. Mitchell, Gilmore, Greenfish, Helena, Hooper Island, Interceptor, Kaimia, Northampton, Opportune, Pandemus, Pocono, Randall, Ross* and *Valley Forge.*

In the shore category, Columbia River Group (Runner-up in 1958); MCB 9, Camp Kue, Okinawa; NAF Naples; NAS Kodiak; NAS Miramar; NAS Moffett Field; NAS Oceana; Naval Propellant Plant at Indian Head, Md.; NavRecSta Brooklyn, N.Y.; NavSta Annapolis; NavRadio Farfan, C.Z.; NavSta Argentia, Newfoundland; NavSta Green Cove Springs, Fla.; NavSta Guam; NavSta Guantanamo (Best shore mess, 1958); NavSta Sangley Point, P.I.; NTC Great Lakes; Submarine Barracks, Portsmouth NSY; and the Naval Submarine Base, Pearl Harbor.

Runner-up award winners in the 1959 Ney Memorial competition, USS *Norton Sound* and NavAirSta New Orleans, both received special certificates in the 1958 contest. The following messes duplicated last year's feat and will receive special certificates for the second time: USS *Gilmore,* USS *Northampton,* Naval Air Facility; Naples; NAS Miramar; NAS Moffett Field; NavRecSta Brooklyn, N.Y.; NavSta Argentia, Newfoundland; NavSta Guam; NTC Great Lakes; and Submarine Barracks, Portsmouth Naval Shipyard.

THE WORD—CDR K. B. Hysong (below) of Ney Committee gets word on food on board *USS Paul Revere.*

MESS MEN—Dessert is readied on *USS Paul Revere. Rt:* Pot Pies at Kami Seya.

SERVICESCOPE

Brief news items about other branches of the armed services.

THE FIRST EXTENSIVE NATION-WIDE high-speed "facsimile network," to permit more rapid dissemination of high-altitude weather information throughout the U.S., has been inaugurated by the U.S. Air Force.

The network takes in five stations of the Air Weather Service—a component of MATS. They are located at Offutt AFB, Nebr., Westover AFB, Mass., Barksdale AFB, La., March AFB, Calif., and at Suitland, Md., just outside of Washington, D.C.

Through this new network the Air Weather Service will provide weather support to the Strategic Air Command by providing high-altitude weather information to U.S. bases at double present transmission speeds.

Linking 57 bases throughout the U.S., the net will provide up-to-the-minute weather charts and data from the Global Weather Central at Offutt and the National Weather Analysis Center at Suitland to all installations of the Third Weather Wing.

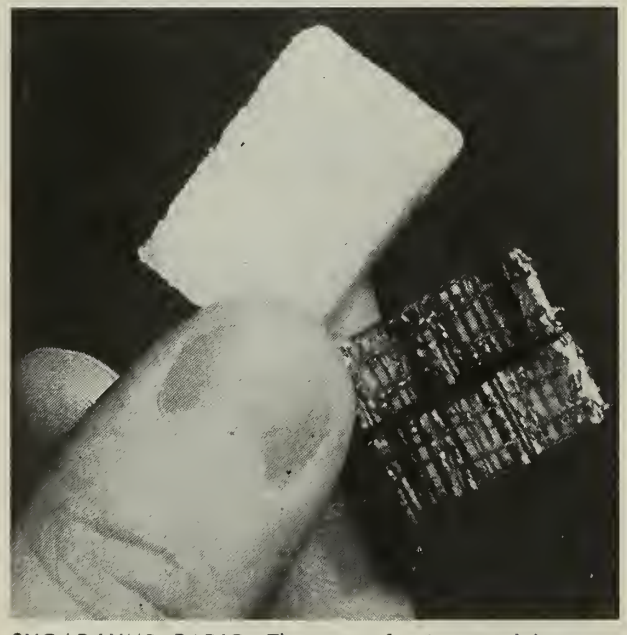
The new system is the largest high-speed facsimile network ever installed in this country. Data is transmitted at a speed of 120 revolutions per minute, twice present speeds. Weather maps sent by the new system are three times as large as facsimile maps currently in use in the U.S., and are transmitted in 30 minutes.

★ ★ ★

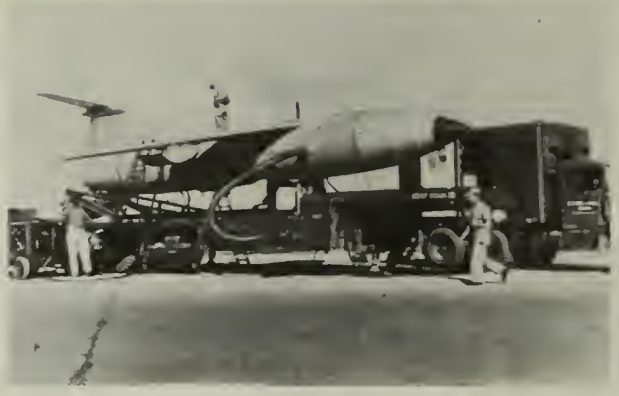
NEARLY 1000 MISSILEMEN from the 158th and 297th Missile Battalions of the Hawaii National Guard are undergoing extensive training this summer at *Nike* missile sites in the Los Angeles area.

This is the first time in history that Guardsmen from the soon-to-be 50th State were flown to Southern California for missile training.

After the summer training the Hawaii National Guardsmen will take over several *Nike-Hercules* sites in the mid-Pacific island state.



SUGAR-LUMP RADIO—The use of micro-modules produced this type of radio—smaller than a lump of sugar.



HOMING BIRD — Personnel of USAF Tactical Missile Group check assembly of *Matador* at site in Korea.

A THREE-STAGE LAUNCHING VEHICLE capable of sending a two-ton manned space laboratory into a 300-mile orbit around the earth is now in production and should be ready for flight tests late next year.

The National Aeronautics and Space Administration has awarded a 33.5-million-dollar contract which calls for the delivery of eight of the vehicles before the end of 1961.

Referred to as *Vega*, this booster is a modified Air Force *Atlas* ICBM that will be used as a two- or three-stage launching vehicle.

The two-stage version will be capable of putting a 5000-pound satellite into an orbit of the earth. The third stage will be added for moon or planetary probes.

According to NASA, the three-stage *Vega* should be able to send a 1000-pound payload to the vicinity of the moon and "softland" several hundred pounds of instruments on it.

Fully loaded, *Vega* will weigh about 295,000 pounds and will stand as high as a 1-story building.

A *Vanguard* booster engine will be used in the second stage and a new third stage using "storable fuel" will be built by NASA's Jet Propulsion Laboratory.

To produce 6000 pounds of thrust in the third stage, a fuel made of nitrogen tetroxide and hydrazine—which can be stored on long missions without evaporating—will be used.

★ ★ ★

THE USE OF 'MICRO-MODULE' circuits has produced radios the size of sugar cubes in a program sponsored by the Army Signal Corps.

Underway since April 1958, the program marks the beginning of the "cubist" era in electronics. In this new scientific and engineering revolution, the vast range of jobs done by transistors and other electronic parts is being compressed into tiny circuit building blocks measuring only a third of an inch on each side. Their small size can save critical space and weight in future satellite systems and rockets.

Although the developments have been primarily for national defense requirements, micro-modules will eventually find their way into homes, commerce and industry. The wall-type television set, its surface determined by the expanse of the viewing tube and the rest of its components in the rim of its picture frame, is

nearer to reality as the result of this new concept. The electronic materials for record players and dictation machines could fit in a pocket or small purse under the micro-module concept. Button-size batteries already developed would provide power for these and other equipment when electrical sockets are out of reach.

The smallest units of a micro-module are tiny flakes of conducting, semi-conducting, or insulating materials, one-hundredth of an inch thick and a third of an inch square. Controlled processing of the wafers turns them into micro-elements with the ability to do the job of specific components such as resistors, transistors, capacitors, diodes, inductors, and crystals. A group of micro-elements are stacked up, interconnected, and encased to form the micro-module itself. These operate as complete circuits, such as amplifiers, oscillators, and other complex electronic functions.

Since the program was launched, tests by the Signal Corps show that the tiny cubes promise to be highly dependable and long-lived; will use little power and deliver high performance, and repairs will be greatly simplified.

★ ★ ★

THE U.S. ARMY at Fort Belvoir, Va., has a new 3000-foot shooting range. They use live troops as targets.

Weapons tested on the new range include searchlights, tank fighting lights, sniperscopes, long-range surveillance scopes, and binoculars.

The shooting range is actually an outdoor laboratory which consists of a 3000-foot outdoor range with control rooms at one end and a variable background at the other.

The laboratory provides facilities to test searchlights at night, evaluate infrared and light intensifier viewing devices, and conduct vision-research under recorded atmospheric and background conditions.

Remote-control switches for both instruments and the background are located in the control room with the recorders and indicators. Portable instruments include low-level illumination and brightness-measuring devices, reflectometer and other measuring instruments.

The artificial background can be changed from the control room to duplicate different field situations. Military vehicles and men are somtimes used as targets in front of this background. A flat painted target is used in front of the background to obtain data on target detection under various conditions of the atmosphere.

HIGH DRINK—An RB 66 reconnaissance bomber of USAF Tactical Air Command moves in on tanker for fueling.

At this outdoor laboratory studies have been made to determine atmospheric effects on searchlight beams and reflected radiation from targets. Image-intensifier systems which use the stars for their light source have also been evaluated there.

★ ★ ★

THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION has announced that a new and still secret rocket fuel with high possibilities for use in strategc missiles is undergoing tests and evaluation.

This propellant is "non-cryogenic." This translates to mean a material that will not evaporate or boil away in a liquid state at normal temperatures. It will, therefore, be easier to handle than present fuels.

Evaluations and tests will explore the prospects for using the new fuel as both a liquid and as a solid propellant.

Because of potential military applications of the new fuel, NASA scientists would say only that the "classified" rocket propellant would permit "substantial increases in payload" for space vehicles.

NEW WEAPONS—Two antitank missiles, SS-10 (right) and SS-11 in flight are being tested for use by the Army.

LETTERS TO THE EDITOR

Back to Sea

SIR: While assigned to a Construction Battalion I was sent on detachment to Deep Freeze III. My shore duty assignment card was sent to my permanent base in the States. It was returned to the Bureau marked "not present."

When I returned from Antarctica I found I had orders for shore duty. Since I didn't get to fill in a Seavey card, I didn't get my choice of naval district.

I have been on shore duty for six months, and would like to get back to sea duty. How can I do this? (I'd even be willing to pay any travel expense involved.)—T. R. P., BM2, USN.

• *Personnel on a normal tour ashore, either in the continental limits of the United States or overseas, are required to complete their tours before rotation, at which time they will be reassigned providing they have sufficient obligated service.*

However, an individual may request, through his commanding officer, that his shore tour be terminated at any time. Each case is examined on its own merits and the decision based on the needs of the service. Approval may be granted in those cases which are favorably endorsed, where there is no shortage ashore and if the individual has been aboard a year or more. An agreement to pay one's own travel is not a consideration in early shore tour termination.—ED.

This section is open to unofficial communications from within the naval service on matters of general interest. However, it is not intended to conflict in any way with Navy Regulations regarding the forwarding of official mail through channels, nor is it to substitute for the policy of obtaining information from local commands in all possible instances. Do not send postage or return envelopes. Sign full name and address. Address letter to Editor, ALL HANDS, Room 1809, Bureau of Naval Personnel, Navy Dept., Washington 25, D. C.

Color Code for Pipelines

SIR: A friend and I were discussing the color code used on valves to identify the different types of systems. This brought others into the discussion. They claim there is no longer a standard color code in use. I have not been able to find anything in *BuShips Manual* or in any other reference that says whether or not the color code is still in effect.

The main topic concerns the color used to identify fuel. According to the chart I have, all fuel valves are identified by the color red painted on the valve wheels. My friend claims they should be painted yellow because all fire stations are red and they could easily be confused by someone new to the ship in connecting them.

Here are my questions. Is there still a standard color code used? If so, where can I obtain one? Is my friend correct about using the color yellow to identify fuel valves used in diesel oil lines?—R. B., SFP3, USN.

• *Your answers may be found in Military Standard 101A of 16 Mar 1954. Here's what it has to say about the color code for Pipelines and for Compressed-Gas Cylinders: "Yellow has been assigned to all Flammable Materials, both primary and secondary warnings; Red has been assigned to Fire Protection Materials, both primary and secondary warnings.*

"Colors assigned in this standard conform in hue and chroma to the requirements identified by numbers specified in Federal Specification TT-C-595. Colors for Ready-Mixed Paints: Yellow, No. 1310 and Red, No. 1105."—ED.

Nice, But Not New, Neosho

SIR: We of the record-breaking USS *Neosho* (AO 143) think we have scored another first.

On 14 Aug 1958, while on maneuvers in the South Atlantic, we refueled three ships simultaneously.

Other ships which took part were USS *Warrington* (DD 843), USS *Hammerberg* (DE 1015) and USS *Bearss* (DD 654). The operation went like this:

0831—*Warrington* commenced her approach to receive astern fueling rig.
0838—First line over to *Warrington*.
0849—*Hammerberg* began approach to starboard.
0850—*Bearss* started approach to port.
0852—First line over to port.
0854—First line over to starboard.
0900—Commenced pumping astern.
0902—Commenced pumping to port.
0905—Commenced pumping to starboard.
0933—Secured pumping astern.
0940—Secured pumping to port and starboard.
0949—All lines clear.

The astern rig used over 600 feet of hose. The three ships received a total of 6308 barrels of oil.—The *Neosho* Record-Breakers.

• *Sorry, but your claim is a bit late. An old-timer right here in the horse's mouth remembers seeing three ships of* COMDESRON *17 refuel simultaneously from the same tanker way back in 1943. At the time the ships were steaming with a wartime convoy in the Atlantic.*

Our ancient mariner—a doddering old geezer who's about to retire so that he can devote more time to his hobby (looking at girls)—makes no claim that COMDESRON *17's exploit was a "first." However, he's positive that it was at least an "earlier."*

Anyone out there want to try for four?—ED.

In the Pay Line

SIR: On the top of page 35 in your August 1958 issue, you show men wearing flat hats in a pay line.

I was a DKC during World War II. When I entered the Navy, I was told by a paymaster to require all crew members to remove their hats while being paid. He explained that the custom stemmed from the days when sailors were paid in gold coins and they held out their hats to receive payment.

I assumed that the paymaster was saltier than I, and until now have had no reason to question his wisdom. Knowing, however, that during 11½ years of assisting in pay lines I have ruffled a lot of feelings by demanding that crew members remove their hats, I would like to be reassured.

Could I have been wrong all those year?—J.W.N., ex-DKC, USN.

• *Here are some soothing words for those you have ruffled. The removal of hats in a pay line is a tradition of such long standing that the practice may be considered "unwritten law." There is no written law, regulation or rule, however, that requires it.*

There are some good reasons for removing the hat. Pay lines are normally held in spaces, such as mess halls, where removal of hats is the general custom. On the other hand, if the pay line is outdoors, or if a man is wearing a duty belt, hats would not be removed.

Rarely will you find a disbursing officer who doesn't expect this time-honored procedure.—ED.

Name That Sub

SIR: Have just returned from sea to find this command featured in the frontispiece (inside front cover) of your April '59 issue of ALL HANDS, although we were disappointingly unidentified.

I feel that you missed a chance for a much more forceful and timely caption on this picture. The incident portrayed is typical of the close coordination developed in Task Group "Alfa." USS *Cubera* (SS 347) was alongside USS *Valley Forge* (CVS 45) during transfer of mail and personnel on a Sunday afternoon when the picture was taken.

As you may know, submarines do not often participate in alongside transfers at sea, owing to their inherent limitations of space and accessibility. We take pleasure in the fact that *Cubera* has frequently performed this evolution successfully with carriers, destroyers and other submarines.

In the past six months, *Cubera* has made at least 12 such transfers in varying conditions of weather. When this picture was taken, we were alongside *Valley Forge* for the second time that day—to transfer a man for separation, and to receive mail and spare parts. The sea state was about three and increasing.

During the transfer, as can be seen by the lowered antennae and the AD spotted on deck, *Valley Forge* launched a strike of ASW aircraft, S2F and AD. This might be some sort of "first"—SS to CVS highline transfer while CVS launches aircraft.

We are pleased to appear so prominently in your magazine, as symbolizing CNO's statements regarding mobility. However, we do feel that *Cubera* and Task Group Alfa have been unduly slighted.—J. J. Herzog, CO, USS *Cubera* (SS 347).

• *We always believe in giving credit where it is due, but we don't always succeed. However, so far as that goes—your letter speaks for itself. Thanks.* —ED.

Postal Clerk Rating?

SIR: Can you give me any word about a new mailman rating. I hear it may be called Postal Clerk. I have heard a few rumors about such a new rating, but nothing official. I am a TE/YN2, and have done a lot of postal work in the past. I'd like to get back into that type of duty again. Any information about the possibility of a mailman rating being proposed and/or considered would be greatly appreciated.—H.D., TE/YN2, USN.

• *Consideration is being given to the establishment of a new general rating for Postal Clerks (PC), but the proposal has not been approved by the Chief of Naval Personnel. Mailman duties, formerly performed by the Teleman (TE), were transferred to the Yeoman (YN) rating in 1957. Even in the event that the Postal Clerk rating is not established, you, as a YN with previous postal work experience, may well be assigned those duties again in the future. Good luck.*—ED.

CVS TO SS—*USS Cubera* (SS 347) displays close coordination with *USS Valley Forge* (CVS 45) during sub-to-carrier highline transfer at sea.

Swords for Temporary Officers

SIR: The discussion in the February letters-to-the-editor section about swords prompts me to ask another question on the same subject.

I am an LDO of rather recent vintage, and ever since I was first commissioned, I have searched for some written word that tells the exact requirements of LDOs and other temporary officers, regarding swords.

The usual answer to the question "Must I have one?" is "They're not mandatory." In one publication I saw it stated "Possession of swords is optional at any time for Reserve and temporary officers." There is a slight technical difference here that no one seems to have elaborated on.

Which is it? Is the sword simply not mandatory, meaning that we would not feasibly be called upon to wear it; or is the sword optional, meaning that we may wear it if we choose?—B.K.S., ENS, USN.

• *You may wear the sword if you choose, if you are a temporary officer. That is clearly pointed out in "Navy Uniform Regulations, 1951," Article 0230, paragraph 2, which states ". . . a sword, sword belt and sword knot are prescribed for all regular Navy commissioned officers (except Chaplains). Optional for Reserve and temporary officers."*

Normally, an LDO is first issued a temporary appointment. During this period the sword and sword accessories are optional—you may or may not wear one as you choose. When you are made permanent LDO, however, a sword must be worn when prescribed.—ED.

Lee Still Going Strong

SIR: In your December 1958 issue, you ran a history of USS *Harry Lee* (APA 10), which ended with her decommissioning in May 1946. In April you published a follow-up letter from CAPT E. B. Ellis, USNR, saying the ship had been sold to Turkey. Your answer to the April letter said the information brought *Harry Lee's* history "almost up to date."

The ship is still operating under the Turkish flag, and she's now going by the name of *Tarsus* (after a town in Turkey).

With this information her history should now be completely up to date. —Bruce V. Sitler, YN1, USN.

• *It certainly should—at least up to the time that this issue of* ALL HANDS *Magazine goes to the press.*—ED.

POLAR PLUNGE—CDR Standish Backus comes up with report after 1956 dive into Antarctic waters to inspect damage to *USCGC Eastwind* (WAGB 279).

Antarctic Skin Divers

SIR: In the article "Antarctic Skin Diver" which appeared in the April 1959 issue of ALL HANDS, you describe LCDR H. R. Walker, USN, as being ". . . the first man to attempt skin diving in the frozen waters of the Antarctic."

I think you are wrong about this. During Operation Deep Freeze One when the port shaft of the *USCGC Eastwind* (WAGB 279) was broken during ice breaking operations in McMurdo Sound, CDR Standish Backus dived into the waters to survey the damage. This happened in February 1956, therefore preceding Mr. Walker's dive.—Lt F.H. Lewis, Jr., CEC, USN.

• *You're right and we should have known better than to say* anything *happened the first time. Seems as though every time we make such a statement, we learn better—the hard way.*

CDR Standish Backus, USNR, *did, as you say, dive to inspect the damage to* Eastwind *on 23 Feb 1956. He wore a regular frogman's suit (see photo). This was during Operation Deep Freeze I (1955-56).*

CDR Backus, besides being a diver, is also an artist. While on Deep Freeze he painted several pictures of Antarctic scenes. His artwork is currently touring the United States with the Navy's "Operation Palette," and has been exhibited in the Navy's Combat Art Center.

There have been several other skin divers working in Antarctic waters. During Deep Freeze II (1956-57) members of UDT 2 conducted underwater surveys of ships' hulls and coastal areas. Since that time still others have tested diving equipment in the polar waters.

Task Force 43 headquarters advises us they have no record of anyone skin diving in Antarctic waters before CDR Backus. But we won't commit ourselves.—ED.

CPO's White Uniform

SIR: Although you have already received quite a response to R.T.S.'s letter on suggested uniform changes that appeared in the September 1958 issue of ALL HANDS, I too would like to add my two cents.

I agree with his suggestion to modify the uniform of CPOs, WOs and commissioned officers to a single-breasted model. As for the idea of smaller hash marks, this too seems wise, especially when considering the cost of gold ones.

Back to the double-breasted coat—it is well known that a large majority of the CPOs have (shall we say) "shifting sands" with the majority of this sand located in the mid-section (not fat, mind you—just slightly plump). Thus, it seems practical, style-wise, that the single-breasted coat should have a more slimming appearance—not to mention the extra girth added by the current double fold over the paunch (ooopppppppssss, I mean) the slight protrusion.

In addition, I would like to reintroduce the subject of the white uniform worn by CPOs. Why, oh why, doesn't someone take pity on us by completely revamping this uniform. I don't believe I've ever heard a good word for it. In fact most remarks about CPO whites are unprintable. Regarding your reply to R.T.S.'s letter—"We should not be hidebound by tradition," I think that it's time for the chiefs to get moving and come up with some ideas for revamping those (censored) whites.—H.J.S., SKC, USN.

• *Now, Chief, you can't say that all remarks about CPO whites are unprintable. We do have "Uniform Regs," you know, but they are always subject to change. If you feel as strongly as you do about them, why not submit your ideas in an official letter to the Chief of Naval Personnel. He always welcomes worthy suggestions.*—ED.

Is It H or M?

SIR: What is the correct designation for the medical department aboard ship and ashore?

The only place I have found a breakdown of departments and divisions is in the PN2 training course (NavPers 10257-A), which calls the medical department "H-1 Division." In our command (an air station) the department is designated "M Division."

I'd also like to find out the maximum time period that can be covered in TAD orders to enlisted men. I know the limit is 20 weeks for men going to school.—E. L. R., PN2, USN.

• *"Shipboard Procedures" (Naval Warfare Publication 50) assigns the title "H Division" to the medical department aboard ship. BuAer Inst. 5451.13 (Standard Organization Guide for Naval Air Stations) assigns the title "Medical Department." However, this does not prevent a commanding officer from assigning a letter designation for local use.*

Now for the second part of your query.

Temporary additional duty is a term of limitation that indicates a short period. TAD orders are usually issued for periods of less than 20 weeks.

The Comptroller General has ruled that a duty assignment lasting more than five or six months cannot reasonably be considered the short duration contemplated by the term "temporary additional duty."—ED.

Smooth as Glass

SIR: That "glossy waters" picture on page 35 of the May issue has started quite an argument around here.

Some of the fellows seem to think it is a photograph, or at least a retouched photograph. I contend it is a painting. Who's right?—J.J.M., ASgt, USMC.

• *We are only sure of two things: It is a photograph, and there is no evidence of retouching.*

The consensus of our ALL HANDS *photo 'experts' is that the photo was taken through a red filter. If you have had much experience with filters, you'll know the unusual effect that is sometimes obtained with the red one.*

Maybe some other readers have taken some photos that show this.—ED.

Sailing on Widgeon

SIR: In reading through a back issue (December 1958) I came across your special supplement on the salvage operations at Pearl Harbor. And, I notice you did not mention my old home—USS *Widgeon* (ASR 1)—and the part she played on Pearl Harbor Day and the days that followed.

If you have any information on this old girl, I'd like to see it published.

At the time of the Pearl Harbor attack the ship's executive officer was Chief Boatswain Swortwood. I can't recall her captain's name. We were berthed at the Sub Base and attached to SubRon Four when the attack came.—B. J. Chambers, BM2, USN.

• *Happy to oblige.*

USS Widgeon *(ASR 1) was built at Chester, Pa., where she was commissioned on 27 Jul 1918 as AM 22. She served as a minesweeper during World War I.*

The ship was out of commission from 15 Apr 1922 until 5 Mar 1923, then returned to active duty to serve again as a minesweeper until 1926, when she was converted to an ASR at Pearl Harbor. During the 1920s and '30s, she was the submarine rescue vessel for the Hawaiian area, a recovery vessel for experimental submarine mines and a training ship for divers.

On 7 Dec 1941 Widgeon *met the Japanese attack with machinegun and rifle fire. In addition, she pumped flooded compartments on* USS California *(BB 44) and went alongside* USS Oklahoma *(BB 37). From* Oklahoma, *she returned to* California *to assist in salvage operations on her from 7 through 12 December.*

On 13 December, Widgeon *made an unsuccessful search for an enemy submarine reportedly sunk off Pearl Harbor. Next day, she pitched in to help salvage* USS Nevada *(BB 36), which had been deliberately run aground to avoid sinking. She remained on that job until February 1942, when* Nevada *was refloated.*

IN THE BEGINNING of her 30 years' Navy service back in 1918 *USS Widgeon* (AM 22) looked like this. She served as a minesweeper during World War I.

Afterward (except for another unsuccessful search for a sunken enemy submarine on 10 Apr 42) she was busy at her primary duties as a submarine rescue vessel and training ship from 18 Feb 1942 until 7 Sep 1943, when she left Pearl Harbor for the mainland. There, she served as submarine rescue vessel for the West Coast until May 1944 when she began another tour at Pearl.

In November 1945 Widgeon *assumed new duties as submarine rescue vessel for the San Diego area. Her stay there was interrupted by the atomic bomb tests at Bikini in 1946, during which she was part of the salvage unit.*

She finally left the Navy in March 1948 and was transferred to War Shipping Administration. Later, she was disposed of by the Maritime Commission.—ED.

SECOND WAR for *USS Widgeon* found her converted to ASR 1 and stationed at Pearl when it was attacked. Here, she assisted in salvage operations.

Plug for the MSC

SIR: During the nearly three years I've been reading ALL HANDS, I've seen little mention and no pictures of MSC class vessels.

At present there are nearly two dozen of these ships in the operating forces and more are under construction.

Since small Fleet units are seldom mentioned on a Navy-wide basis, I thought you might be interested in saying something about USS *Thrush* (MSC-204).

Commissioned in 1955, *Thrush* is under the operational control of Com-Six.—B.E.W., LTJG, USNR.

• *We agree with you that it's been some time since a story and/or picture of a coastal minesweeper (non-magnetic) has appeared in* ALL HANDS. *Obviously though, you missed the February 1957 issue which contained a complete round-up of the mine warfare picture. (Also see page 33, this issue, and last month's* ALL HANDS, *page 25.)*

The 22 non-magnetic coastal minesweepers now in the operating forces are a part of 176 American-built in the past few years. They have plywood hulls, diesels built of stainless steel alloy, metal fittings made of aluminum, brass or magnesium, and gas turbine generators supplying high voltages for cables sweeping magnetic or acoustic mines.

The other 154 U. S.-built MSCs, plus 41 near-sisters built abroad with "Off-Shore" funds, have been transferred to the navies of Belgium, China, Denmark, France, Italy, Japan, the Netherlands, Norway, Pakistan, Portugal and Spain under the Military Assistance Program.—ED.

Ship Reunions

News of reunions of ships and organizations will be carried in this column from time to time. In planning a reunion, best results will be obtained by notifying the Editor, ALL HANDS Magazine Room 1809, Bureau of Naval Personnel, Navy Department, Washington 25, D. C., four months in advance.

• USS *Memphis* (Armored Crusier 3) (Formerly USS Tennessee)—A reunion will be held in Philadelphia on 29 August. For further details, write to Alvion Mosier, 611 Rector St., Philadelphia. Pa.

• USS *Owen* (DD 536)—The 12th annual reunion will be held at the Barlum Hotel, Detroit, Mich., on 5, 6 and 7 September. Details are available from Floyd Wooster, 7155 South Dobson St., Chicago, Ill.

• *North Sea Mine Force*—A reunion is scheduled for 8, 9 and 10 October at the Hotel New Yorker, New York, N.Y. You may obtain more information from J. J. Kammer, 54 Walnut Ave., Floral Park, L.I., N.Y.

• *33rd Seabees*—The 13th reunion will be held on 18, 19 and 20 September at the Hotel Statler-Hilton, Buffalo, N.Y. For further details write to George Dauman, 79 Earl Pl., Buffalo 1, N.Y.

• *93rd Seabees*—A combined reunion of the Eastern Division and Midwestern Club will be held at the LaFayette Hotel, Buffalo, N.Y., on 4 and 5 September. For more details, write to Mike Suvak, 59 Gorsline St., Rochester 13, N.Y.

• USS *Bottineau* (APA 235)—All crew members who are interested in holding a reunion may write to E. D. Curlee, Room 1025, 139 West Van Buren St., Chicago 5, Ill.

• USS *Gandy* (DE 764) or USS *LSM 352*—All former crew members of either ship who are interested in holding a reunion with time and place to be decided write to Joseph Fortuna, Box 153, Evington, Va.

Comments on a Smart Ship

SIR: I read with much interest the special report, "Is There a Formula for a Smart Ship?" in your January issue.

My brief service in the Navy began in 1948. Since then I have seen many changes come along—among them the Career Compensation Act of 1949 and other laws designed to make military and naval careers more attractive financially.

To me, the real career compensation lies in the knowledge that the Navy is on the right track with its leadership program.

Pride in ship or station is something that money cannot buy. Every command has within it men who are, or could be, truly great. Each of these men is only as effective as his next superior and, as I look upward in my own organization, I see a great challenge which calls for creative thought, a positive outlook and an example to follow.

The Navy is as sound as the United States of America. It belongs to all of us, just as the Constitution belongs to every American.

We have great potential. It is heartwarming to see it put to use.—William E. Harden, QM1, USN.

SIR: Your special report about USS *Rankin* (AKA 103) in the January issue gave an excellent account of a ship, her accomplishments and her commanding officer, CAPT John Harllee, USN.

I am one of the fortunate people who had the distinct pleasure of serving under him when he fitted out Motor Torpedo Boat Squadron 12 and took it into action against the Japanese during World War II.

When we were students at the motor Torpedo Boat Squadron Training Center in Melville, R. I., he personally interviewed every man who was going into his unit. Then and there, he impressed me as the type of officer I would enjoy serving under. He was intensely interested in each and every man and his problems and desires. He personally saw to it that we had the best equipment and training available.

As the records show, MTB Squadron 12 did an outstanding job (much to the chagrin of the enemy), and it was one of the few such squadrons to receive the Presidential Unit Citation.

CAPT Harllee personifies the leadership, understanding and moral qualities that make an outstanding naval officer. Hence, it is easy to understand why *Rankin's* crew followed through.—Edward W. Romanski, ELECTECH, W-1, USN.

• *Thanks for the unsolicited—but not unappreciated—testimonials.*—ED.

Gold Hashmarks

SIR: I'm proud of my gold rating badge and hashmarks, but I'm beginning to think that many Navymen are not. Evidently they believe that gold may be worn (if they choose) after 12 continuous years of good conduct on active duty, but don't realize that it is a required part of their uniform.

There also seems to be some doubt about wearing gold on undress blues. It's required, but rarely seen.

One thing still bothers me about wearing gold, however, *Navy Uniform Regulations* doesn't make it very clear.

What about a man who fouls up on his first hitch, say after 36 months in the Navy. What color strips would he wear after 16 years?—D.C.G., PNC, USN.

• *You have every reason to be proud of the gold on your arm, and you're right about the misunderstanding regarding the gold rating badge and service stripes. Gold must be worn on both dress and undress blues by men who have 12 years' continuous good conduct on active duty. This is frequently overlooked.*

Concerning your question about a man who fouls up: As Article 1202, paragraph 6 (d) of "Uniform Regulations" states, you are required to wear gold after 12 years' continuous good conduct on active duty—12 years of continued eligibility for the Good Conduct Medal.

If a person fouls up, as you say, after 36 months, but stays out of trouble from there on, he would be required to put on three gold hashmarks after 15 years' service. After 16 years' service in the Navy, he would sew on the fourth gold hashmark—together with the gold rating badge, of course. Scarlet and gold can never be mixed.

By the same token, if a man has already earned his gold and then fouls up, he must take it off and replace it with scarlet. Gold on a man's arm means but one thing—12 years of continuous good conduct on active duty.

If you see a man with five gold hashmarks, he may or may not have 20 years' continuous good conduct; but you know one thing, he has at least 12. —ED.

Wearing Brassards

SIR: Your Feb 1959 edition carried an excellent article entitled "Naval Courtesy." It was, as stated in the foreword, "a subject good for a fantail session."

A discussion here at NAS Niagara Falls, N. Y., led to the following questions, for which we seek authoritative answers:

(1) *U. S. Navy Uniform Regs* (Articles 0113 and 1204) limits the wearing of arm brassards to specific types of duty. In view of this and Art. 0104 of *Uniform Regs* should (or may) personnel in a duty status aboard a shore activity wear brassards indicating duty assignments, such as OOD, CDO, JOOD, Section Leader, etc?

(2) If officers are permitted to wear brassards other than those specified in *Uniform Regs*, are they worn in lieu of the binoculars or spyglasses prescribed for the Officer of the Deck, in port, and the pistol belt or sidearms prescribed for personnel in a duty status?

(3) At shore activities when brassards are worn by personnel in a duty status and not wearing sidearms or pistol belt, should such personnel remove their hats or caps indoors other than in spaces where a meal is in

progress or divine services are being conducted?—A. J. T., LCDR, USNR.

• *Glad you liked the article, Commander. We're always happy to stir up a little healthy and rewarding discussion.*

Herewith are the authoritative answers to your questions, in the same order in which you posed them.

(1) U. S. Navy Uniform Regs *does not cover all types of duties for which brassards may be prescribed. The Officer of the Day and the Junior Officer of the Day on duty at a shore station should wear an "OOD" or a "JOOD" brassard as appropriate. Sidearms may also be prescribed.*

(2) The brassard in these cases serves as a badge of office, and, as such, may be considered to take the place of binoculars or spyglasses carried by the Officer of the Deck

(3) An Officer of the Day while on duty and wearing a brassard without sidearms is still considered to be properly identified as an officer in a duty status, and therefore should not normally remove his cap indoors.—ED.

Reenlistment Bonus

SIR: There's a disagreement among a number of the men here at NAS Norfolk, about the provisions of Public Law 506 concerning reenlistment bonuses. Disbursing Clerks, USN, and Personnel Specialists, USAF, have come up with conflicting opinions.

My question concerns the following example. Say a man first enlisted in the Air Force in 1950, and reenlisted in 1954, receiving his first reenlistment bonus. After his second enlistment was completed he enlisted in the Navy, receiving no reenlistment bonus. Now, at the end of this first enlistment in the Navy, if he reenlists in the Navy, is he entitled to a first or second reenlistment bonus?

Two CPOs here maintain that Public Law 506 pertains to all branches of the service, and that this would be counted as his second reenlistment. I say that this would be his first reenlistment with the Navy, and that he would receive a first reenlistment bonus —L.R.J., YN2, USN.

• *Afraid the chiefs are right and you are wrong in this instance. According to our sources, the example you cite is covered by regulations spelled out in Para. 044075-1a of the "Navy Comptroller Manual."*

A reenlistment bonus, when otherwise proper, is payable only if a member of the uniformed services reenlists in a regular component of the same service from which he was discharged. Therefore, a man who is discharged from one service and enlists in another is not entitled to a bonus. The man's reenlistment in the Air Force in 1954 was a first reenlistment. He would be entitled only to a reenlistment bonus for a second reenlistment if he reenlists in the Navy.—ED.

Keeping the Records Straight

SIR: I have heard rumors for some time that the rating review board is considering the establishment of a rating for aviation records duties (aviation maintenance administration). Such a possibility is of considerable interest to a great many ADs who have long done such work.

Could you tell me if such a rating may be established, and also what the requirements for such would be?—B. B. F., AD1 USN.

• *A new general rating of Aviation Maintenance Administration Man (AR) has been proposed as a result of research conducted into the structures of all Group IX-aviation ratings. The AR, together with other new Group IX ratings, is now being considered by the Chief of Naval Personnel. No decision has been reached. If established, you'll get the scoop via official directives.*—ED.

Checked for Excess Leave

SIR: If a man reenlists early—say two and one-half months before the end of his enlistment—and he has taken five days' excess leave, would he be checked for those days?

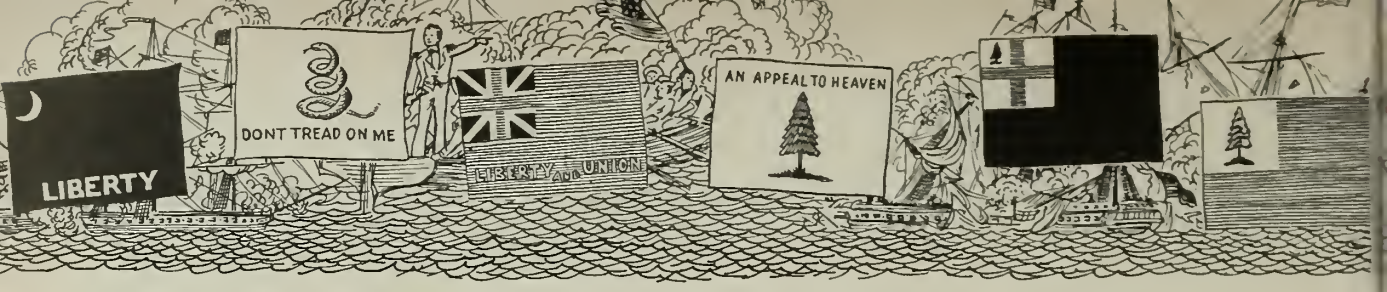
If he would be, why wouldn't the same thing happen to someone who ships six months early?

Some DKs and I have been going round-and-round about this and I want to be set straight—W. P. F., YN2, USN.

• *A man who is discharged three months or less before the end of his enlistment for the purpose of reenlistment is considered to have been separated at the expiration of his service contract.*

Paragraph 044241-3B of the "Navy Comptroller Manual" states that a member of the Navy or Naval Reserve who is discharged at the expiration of his enlistment will be checked for pay and allowances for excess leave.

Anyone who is discharged more than three months early for the purpose of immediately shipping over, however, is considered to have been separated at other than expiration of enlistment, and pay and allowances for excess leave will not be checked. In this case, the excess leave is carried forward to the new record.—ED.



Stars and Stripes Forever

LAST MONTH the United States flag officially acquired its 49th star.

Next Fourth of July it will get its 50th.

For most Navymen now on active duty this is the first time in their lives that the flag has been altered. However, they will still snap to at "colors" with the same sense of awe and respect that they have always felt for our national ensign.

Thousands of years before the birth of Christ, fighting men experienced a feeling closely akin to this, for "flags" of one sort or another have long meant something special among warriors.

In ancient Egypt, objects ranging from sacred animals to tablets bearing a king's name were borne into battle at the top of a staff.

In Persia an eagle was carried on the end of a lance, and in early

Greece a piece of armor borne on a spear served as a standard.

The Romans guarded their flags in temples with religious veneration, and Roman generals sometimes had the standard thrown into the enemy's ranks, knowing that their soldiers would fight furiously to recover what to them was one of the most sacred things on earth.

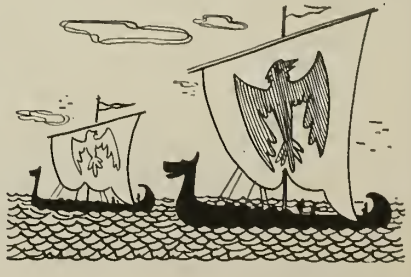
At sea, the ancients decorated the sails of ships to serve as flags—a custom which survived into the Middle Ages.

BY 1775, when the American Revolution began, the idea of having a flag was so old and so well established in men's minds that it wasn't long before each of the 13 Colonies had a flag of its own. For instance, Massachusetts had a pine tree on its colors. New York had a white flag with a black beaver on it.

Rhode Island's standard had a blue canton or union, containing 13 five-pointed stars, and a white field decorated with a blue anchor, above which the word "Hope" appeared on a scroll. Some authorities believe the canton of the Rhode Island flag was an important influence on the design of the Stars and Stripes.

Besides the state flags, various military and naval units had flags of their own, many of which featured a rattlesnake with 13 rattles and the motto, "Don't tread on me." One writer of the period gave this explanation of the rattlesnake's significance:

"It is curious and amazing to observe how distinct and independent of each other the rattles of this reptile are, and how firmly they are united together. One of these rattles, singly, is incapable of producing a sound, but the ringing of 13 together



Uses and Terms for National Flags

Many countries have variations to their national flags that have been authorized for specific uses. Those flags more generally encountered, and of particular interest to the Navy, are the ones designated to be flown by men-of-war and merchant ships. The terms listed below are not standard in all countries but are generally used:

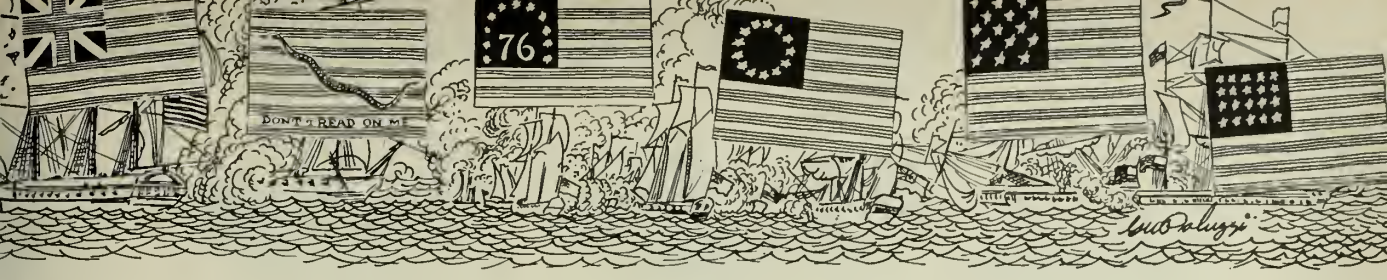
National—The flag flown to represent the government.

Ensign—The flag designated by the country to be flown by the men-of-war.

Merchant—The flag designated by the country to be flown by merchant vessels registered in that country.

National and regimental flags and colors:

- The national and regimental (organization) flags carried by dismounted organizations are called the "national color" and the "regimental (organization) color." The term "color" implies the national color, term "colors" implies both national and regimental color.
- The national and regimental flags carried by mounted or motorized organizations are called the "national standard" and the "regimental standard." The term "standard" implies the national standard. The term "standards" implies both the national standard and the regimental standard.
- Colors may be carried in any formation in which two or more companies participate and in escorts when ordered.
- Not more than one national color will be carried by a regiment or any part thereof when assembled as a unit.
- Each landing party battalion is equipped with a national color and an organization color. When participating independently in operations, ceremonies, or street parades ashore, each battalion will carry its own colors. When two or more such battalions are formed as a regiment, only one national color and one organization color will be carried.



The Evolution of Our Flag

is sufficient to alarm the boldest man living."

Most of "Washington's Fleet" or "Washington's Cruisers," a collection of small armed ships which George Washington had fitted out

in the early part of the war, sailed under a white pine tree flag which bore the motto, "An Appeal to Heaven." However, the commander of the fleet, Captain John Manley, of Massachusetts, also had a Rhode Island-style flag hoisted on his ship, the armed schooner *Lee*.

ON 13 Oct 1775 the Continental Congress voted to fit out ships for a Continental Navy "with all possible despatch." On the 20th of that month Washington suggested to Congress that a flag be adopted so that the "vessels may know one another." Although the Rhode Island flag was favored, Congress took no action on the proposal.

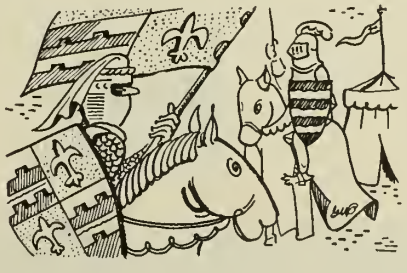
To get a Navy started as soon as possible, merchant ships were bought and armed. The ships *Alfred* and *Columbus* and the brigs *Andrew Doria* and *Cabot* were acquired in November. The sloops *Providence* and *Hornet* and the schooners *Wasp* and *Fly* followed shortly.

On 3 Dec 1775, when the Continental Fleet was commissioned, it flew the new Grand Union flag, sometimes called the "First Navy Ensign," the "Congress Colors" or the "Cambridge Flag." This had 13 alternate red and white stripes and a blue canton containing the crosses of St. George and St. Andrew which appeared on the British flag. (At that time the Colonies hadn't yet declared their independence.)

In addition to the Grand Union flag, two others were carried in *Alfred*, the flagship of the new fleet, when Commodore Esek Hopkins sailed out of the Delaware River on 17 Feb 1776 to raid New Providence in the Bahamas. One of the flags had a yellow background and showed a coiled rattlesnake above the words, "Don't Tread on Me." The other, known as the first Navy Jack, had the same motto, but the rattlesnake was stretched across 13 alternate red and white stripes.

While the fleet was preparing for its first expedition, the Grand Union flag was also unfurled in the American lines around Boston on 1 Jan 1776 as the standard of the Continental Army.

The first distinctive American standard displayed in the South was the Moultrie flag, a blue banner with the word "Liberty" in white letters along the bottom edge and a white crescent in the upper corner next to the staff. This flew over the fort on Sullivan's Island, in the channel leading to Charleston, S. C., when Colonel William Moultrie and a force of some 375 regulars and a few militia withstood a fierce attack by Sir Peter Parker's British fleet on 28 Jun 1776. (The British ships opened fire at about 1030 and kept up their bombardment for some 10 hours, but the garrison put up such a stout defense that the British were forced to withdraw under cover of darkness. Moultrie's victory saved the southern colonies from invasion for about two years.)



EVEN AFTER THE Declaration of Independence was adopted on

4 Jul 1776, the Grand Union flag, with its crosses of England and Scotland, continued to be used, and as late as September 1776 Congress directed privateers to fly this type of flag.

Among those who recognized the inappropriateness of this standard was William Richards, a Navy quartermaster. In October 1776 he wrote a complaint that the flag was unsuitable and pointed out that an appropriate one could not be obtained until a design was fixed. Nevertheless, the Navy continued to use the Grand Union flag.

On 14 Jun 1777 Congress finally adopted a design for the national flag, resolving that "The flag of the United States shall be 13 stripes, alternate red and white, with a union of 13 stars of white on a blue field, representing a new constellation."

The 13 stars were usually arranged in a circle, but, since there was no definite rule on the subject, some flags had 12 stars in a circle with the 13th in the center: others had them in three horizontal rows of four, five and four: and still others had them in alternate lines and rows of threes and twos, arranged in a pattern similar to that formed by the crosses of St. Andrew and St. George. The design with the 13 stars in a circle is sometimes called the

"The flag, when carried in a procession with another flag or flags, should be either on the marching right, that is, the flag's own right, or, if there is a line of other flags, in front of the center of that line. The flag should not be displayed on a float in a parade except from a staff, or so suspended that its folds fall as free as though the flag were staffed."

"The pledge of allegiance to the flag, 'I pledge allegiance to the flag of the United States of America and to the Republic for which it stands, one Nation under God, indivisible, with liberty and justice for all,' shall be rendered by standing with the right hand over the heart. Persons in uniform shall render the military salute."

"The flag of the United States of America should be at the center and at the highest point of the group when a number of flags of States or localities or pennants of societies are grouped and displayed from staffs."

"When flags of two or more nations are displayed, they are to be flown from separate staffs of the same height. The flags should be of approximately equal size. International usage forbids the display of the flag of one nation above that of another nation in time of peace."

"The flag should form a distinctive feature of the ceremony of unveiling a statue or monument, but it should never be used as the covering for the statue or monument."

"When flags of States, cities, or localities, or pennants of societies are flown on the same halyard with the flag of the United States, the latter should always be at the peak. When the flags are flown from adjacent staffs, the flag of the United States should be hoisted first and lowered last. No such flag or pennant may be placed above the flag of the United States or to the right of the flag of the United States."

"When the flag is displayed otherwise than by being flown from a staff, it should be displayed flat, whether indoors or out, or so suspended that its folds fall as free as though the flag were staffed. When the flag is displayed over the middle of the street, it should be suspended vertically with the union to the north in an east and west street or to the east in a north and south street."

"During the cere... flag or when the ... review, all perso... stand at attenti... uniform should re... in uniform, men ... the right hand. h... hand being over t... salute in the sam... attention. Wom... right hand over t... in the moving c... mor...

★★★★★★★★★ U.S. NAVY F...

National Ensign

National Ensign—Aboard ships, the ensign is displayed from the gaff on the aftermast mast during daylight hours when:

1. Getting underway and coming to anchor.
2. Falling in with other ships.
3. Cruising near land.
4. During battle.
5. When otherwise directed by the senior naval officer present.

Union Jack

Union Jack—It is a replica of the starred-blue section of the U.S. flag. The union jack is flown from the jackstaff on the forecastle from 0800 until sunset whenever a ship is not underway. The union jack also is flown from a yardarm during general court-martial or court of inquiry aboard ship. The union jack displayed from the jackstaff shall be the size of the union of the national ensign displayed from the flagstaff. The union jack is never displayed when a ship is underway.

Half Mast

Half Mast—The national ensign and union jack, when a ship is in port, are halfmasted upon the death of the President, Vice President, Secretary of Defense, Secretary of the Navy, and other designated public officials, the flag officer in command, a unit commander who is below flag rank, commanding officer, or other designated members of the service—as described in U.S. Navy Regulations (Arts. 2191 and 2192).

When a ship is transporting the body of a deceased official, the honors and ceremonies prescribed for an official visit shall, if directed by the senior officer present or higher authority, be rendered when the body is received aboard or leaves the ship.

Hono...

Honors to O... ing two or ... flown from t... the United ... honors, the S... starboard of ... below. Ensig... played, starb... order. The e... within whose ... always is dis... other foreign t... flag. In Fore... the national e... eign ports in ... section 8, of U... are two excep... honors to a ... (2) When to ... Soudi-Arabian ... lieu of obta...

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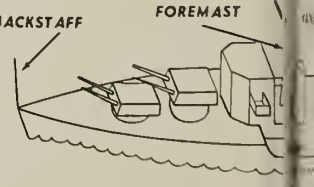

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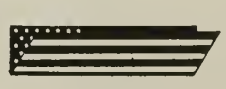

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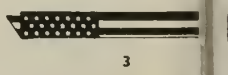
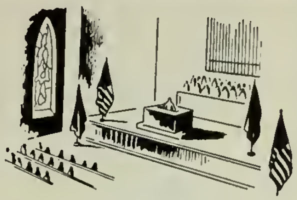


3

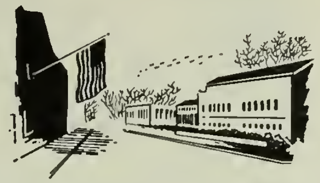
Folding the ...

Prepared by All Hands Magazine

...f hoisting or lowering the ...passing in a parade or in a ...ent should face the flag, ... solute. Those present in ... military salute. When not ...emove the headdress with ...t at the left shoulder, the ... Men without hats should ...r. Aliens should stand at ...ld salute by placing the ...t. The salute to the flag ...hould be rendered at the ... flag passes."



"When displayed from a staff in the chancel of a church, or on the speaker's platform in a public auditorium, the flag should occupy the position of honor and be placed at the speaker's right. Any other flag on the platform should be placed at the speaker's left as he faces the audience. But when the flag is displayed elsewhere than on the platform it shall be placed at the right of the audience as they face the platform. Any other flag so displayed should be placed on the left of the audience as they face the platform."



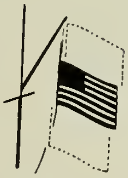
"When the flag of the United States is displayed from a staff projecting horizontally or at an angle from the window sill, balcony, or front of a building, the union of the flag should be placed at the peak of the staff unless the flag is at half staff. When the flag is suspended over a sidewalk from a rope extending from a house to a pole at the edge of the sidewalk, the flag should be hoisted out, union first, from the building."

"When the national anthem is played and the flag is not displayed, all present should stand and face toward the music. Those in uniform should salute at the first note of the anthem, retaining this position until the last note. All others should stand at attention, men removing the headdress. When the flag is displayed, all present should face the flag and salute."

...AG ETIQUETTE ★★★★★★★★★

...ther Nations

...tions—When honor... ...tions, all flags are ... masthead. When ... is included in the ... Stripes are flown to ...ers—not above or ...ther nations are dis...part, in alphabetical ... the foreign nation ... the ship is located ... to starboard of all ...t portside of the U.S. ...—Ships display only ...d union jack in for...ice with chapter 21, ... *Regulations*. There ... 1) When rendering ...nation or dignitary. ...sit Ras Tonura, the ...flown at the fore, in ...lamatic clearance.



Dipping

Dipping—When any vessel, under United States registry or the registry of a nation formally recognized by the government of the United States, salutes a ship of the Navy by dipping her ensign, it shall be answered dip for dip. If not already being displayed, the national ensign shall be hoisted for the purpose of answering the dip. An ensign being displayed at half-mast shall be hoisted to the truck or peak before a dip is answered.

No ship of the Navy shall dip the national ensign unless in return for such compliment.

Of the colors carried by a naval force on shore, only the battalion or regimental colors shall be dipped in rendering or acknowledging a salute.

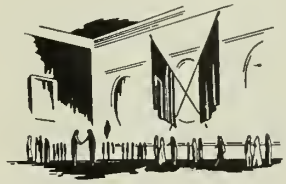
Church Pennant

Church Pennant—During divine services in ships underway, the church pennant is flown from the gaff on the mainmast and from the flagstaff when in port or at anchor. The church pennant is the only pennant or flag flown above the national ensign.

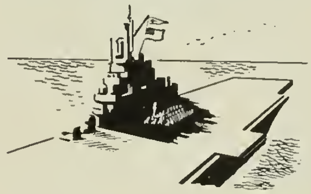
At Anchor

At Anchor—When at anchor or moored, the ensign is flown from the flagstaff on the fantail from 0800 until sunset.

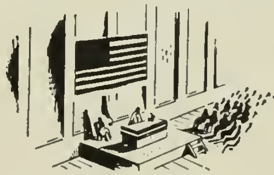
"When the flag is used to cover a casket, it should be so placed that the union is at the head and over the left shoulder. The flag should not be lowered into the grave or allowed to touch the ground. The flag, when flown at half staff, should be first hoisted to the peak for an instant and then lowered to the half-staff position. The flag should be again raised to the peak before it is lowered for the day."



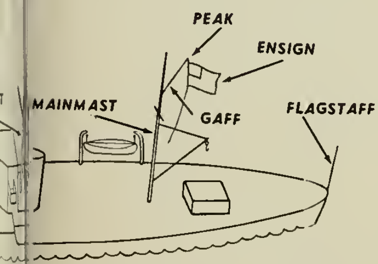
"The flag of the United States of America, when it is displayed with another flag against a wall from crossed staffs, should be on the right, the flag's own right, and its staff should be in front of the staff of the other flag."



"No other flag or pennant should be placed above or, if on the same level, to the right of the flag of the United States of America except during church services conducted by naval chaplains at sea, when the church pennant may be flown above the flag during church services for the personnel of the Navy."



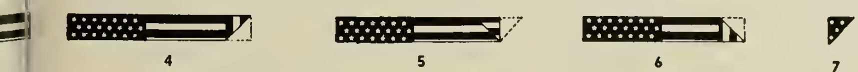
"When used on a speaker's platform, the flag, if displayed flat, should be displayed above and behind the speaker."



Flag Locations

The ensign is flown from the gaff underway; from the flagstaff in port.

The jack is flown from the jackstaff in port and is never flown underway.



"Betsy Ross flag," although historians don't agree on the details of the familiar story about Mrs. Ross making—or helping to design—"the first flag." At any rate, it is known that she was paid by the Pennsylvania navy ". . . for making ships colours . . ." about two weeks before Congress adopted the new flag.

As has already been stated, five-pointed white stars in a blue field had been used earlier on the Rhode Island standard. Red and white stripes—known in England as the

"Rebellious Stripes"—had appeared on the flag of the Sons of Liberty quite a while before the Revolution.

FROM 1775 TO 1794 there was no change in the number of stars and stripes, even though two new states were admitted to the Union during that period—Vermont on 4 Mar 1791, and Kentucky on 1 Jun 1792. Then, on 13 Jan 1794, Congress passed an Act resolving "That from and after the first day of May, one thousand seven hundred and ninety-five, the flag of the United States be fifteen stripes alternate red and white; that the union be fifteen stars, white in a blue field."

This was the United States flag for almost 23 years—very busy years for a country as young as ours. For instance, we fought the Naval

First Official Navy Flag

War with France, forced the Barbary Pirates to stop collecting tribute from American merchantmen and battled with England in the War of 1812. It was a 15-star, 15-stripe flag, flying over Fort McHenry, which inspired Francis Scott Key to write "The Star Spangled Banner." We also fought under a similar flag when we won the Battles of Lake Erie and New Orleans.

The country was growing so fast that the flag designers almost seemed unable to keep pace. Tennessee had entered the Union on 1 Jun 1796, followed by Ohio on 1 Mar 1803, Louisiana on 30 Apr 1812, Indiana

on 11 Dec 1816 and Mississippi on 10 Dec 1817. Thus, by the beginning of 1818 there were 20 states in the Union and still only 15 stars and stripes on the flag. Obviously, if new states kept coming in at the same rate, and we kept adding a new stripe for each of them, the flag would soon become unwieldy. So a committee, headed by Captain Samuel Chester Reid, was given the job of creating a new design that could be altered with a minimum of difficulty as the Union grew.

(Captain Reid was a hero of the War of 1812. Born in August 1783 at Norwich, Conn., he had gone to sea at the age of 11. Later he served with the Navy as acting midshipman in USS *Baltimore*, sailing with Commodore Thomas Truxtun.

As a privateer during the War of

1812, Reid commanded the brig *General Armstrong* when it was attacked by three large British ships on 26-27 Sep 1814 at Fayal, in the Azores. Although he had to scuttle his ship to escape capture, he and his crew of 90 killed or wounded several hundred of the enemy, and the fight kept the British ships from getting to New Orleans in time to join the battle there.)

CAPTAIN REID recommended that the number of stripes in the flag be reduced to 13, which would represent the original colonies, and that a star be added to the blue union for each new state. His proposals were adopted by Congress on 4 Apr 1818 in a law which was to take effect on the Fourth of July of that year. Under the law, a star for a new state was to be added on the Fourth of July following the state's admission to the Union.

Once again, the law made no specification as to the arrangement of the stars. Captain Reid had visualized them in a pattern which formed one large star, indicative of the Union. The captain's wife sewed a flag of that desgin which was unfurled above the House of Representatives on 14 Apr 1818. However, President James Monroe chose a pattern with four rows of stars and five stars to a row.

Since the 20-star flag became official on 4 Jul 1818, subsequent stars for new states have been added as shown on the left. —Jerry Wolff

State	Date of Admission	Star Added on 4 July of Year	State	Date of Admission	Star Added on 4 July of Year
Illinois	3 Dec 1818	1819	Nevada	31 Oct 1864	1865
Alabama	14 Dec 1819	1820	Nebraska	1 Mar 1867	1867
Maine	15 Mar 1820	1820	Colorado	1 Aug 1876	1877
Missouri	10 Aug 1821	1822	North Dakota	2 Nov 1889	1890
Arkansas	15 Jun 1836	1836	South Dakota	2 Nov 1889	1890
Michigan	26 Jan 1837	1837	Montana	8 Nov 1889	1890
Florida	3 Mar 1845	1845	Washington	11 Nov 1889	1890
Texas	29 Dec 1845	1846	Idaho	3 Jul 1890	1890
Iowa	28 Dec 1846	1847	Wyoming	10 Jul 1890	1891
Wisconsin	29 May 1848	1848	Utah	4 Jan 1896	1896
California	9 Sep 1850	1851	Oklahoma	16 Nov 1907	1908
Minnesota	11 May 1858	1858	New Mexico	6 Jan 1912	1912
Oregon	14 Feb 1859	1859	Arizona	14 Feb 1912	1912
Kansas	29 Jan 1861	1861	Alaska	3 Jan 1959	1959
West Virginia	20 Jun 1863	1863	Hawaii		1960

AT YOUR SERVICE—DD sailor highlines to *Everglades* doctor. *Rt: USS Everglades* (AD 24) tends to her destroyers.

A Visit to USS Everglades

"IT'S LIKE LIVING in a small town and being able to visit a big city to buy clothes, have your eye glasses or teeth cared for, pick up supplies or have a piece of machinery repaired." That's the expression of a destroyerman from USS *Wallace L. Lind* (DD 703) as his ship moored alongside destroyer tender USS *Everglades* (AD 24) in the Med.

Everglades is a floating repair facility for destroyers. But during a recent cruise to the Med from her home port of Norfolk, Va., the destroyer tender went a step further in carrying out her primary duty. In addition to repairing and servicing DDs of the Sixth Fleet, *Everglades* furnished facilities and services to other ships of the Fleet ranging from the size of small wooden mine sweepers to the large attack aircraft carrier USS *Forrestal* (CVA 59).

USS Everglades had missions other than repair work during her tour with the Sixth Fleet. She delivered 882,000 gallons of fuel oil, more than 100,000 gallons of water, and a vast quantity of provisions ranging from hair tonic, toothpaste, shaving cream, and cigarettes to frozen foods and ice cream. Most of this was accomplished during underway replenishment.

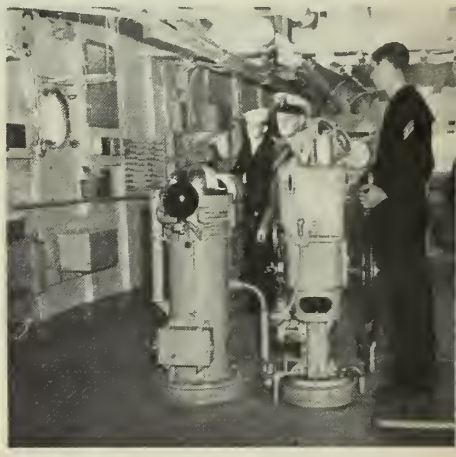
While in port, men of *Everglades* were kept busy carrying her work load even while some of her crew went on liberty—in spots whose names read like an advertisement from an expensive travel agency.

Tons of laundry were processed and thousands of uniforms cleaned and pressed, The ship's only medical officer performed 90 operations during the tour and the dental department received nearly 2,000 patients. The three dental officers completed approximately 2,700 fillings, 268 extractions and performed over 200 other dental chores.

During the five-month cruise the AD worked on more than 40 ships. Services rendered included repairing boilers, replacing eight-ton destroyer propellers, replacing thousands of water, steam, oil and other valves. She also furnished steam, electricity and water to ships alongside. Machine shops manufactured hundreds of spare parts, electrical gangs went to work on faulty wiring and electronics technicians squared away radar and other delicate instruments.

In spite of her big job, morale was not overlooked and *Everglades'* crew took time out for rest and recreation. Eleven tours were available during the ship's visit to seven ports in five countries bordering the Med. These included tours of Florence, Pisa, Venice, Rome, and Mount Vesuvius plus a ski trip to the Italian Alps, visits to the French Riviera, Monte Carlo and Monaco.

—F. W. Doby, JO1, USN.



'GLADES' crew members stand pilot house watch. *Below:* Fuel is passed to *USS Hank* (DD 702) underway.

★ ★ ★ ★ TODAY'S NAVY ★ ★ ★ ★

HOT CARGO—Ammunition ship *USS Great Sitkin* (AE 17) sails Atlantic out of her home port of New York. She makes her home yard at Norfolk, Va.

Latest Style in Fleet Shoes

The Navy has adopted a new water-, oil- and wear-resistant utility shoe for Fleet-wide use.

Known as the Fleet Shoe, the new item was developed by the Clothing and Textile Division of the Naval Supply Research and Development Facility at Brooklyn, N. Y., with the cooperation of the National Bureau of Standards as well as leather, shoe and allied chemical industries. It is expected to replace the standard high-topped General Purpose Shoe, the flesh-out "boondocker" or CB Shoe and the Flight Deck Shoe.

The ankle-high "chukka" style footgear has silicone-treated upper leather that takes a brilliant shine. Non-marking heels and soles, made of specially compounded synthetic rubber, are highly resistant to abrasion—even on the sanded flight decks of the newest aircraft carriers.

The shoe was under development and evaluation for more than two years, during which laboratory research and manufacturing trials, plus extensive field tests, were conducted. Ashore, the shoe was worn by recruits at Bainbridge, Md., and Great Lakes, Ill., and by Seabees at Davisville, R. I. Afloat, it was tested by the men of USS *Edward H. Allen* (DE 531), *Kyne* (DE 744), *Thaddeus Parker* (DE 369), *Forrestal* (CVA 59), *Seawolf*, SS(N) 575, and the tug, USS *Konoka* (YTB 151).

Unfortunately, you can't run right down to your neighborhood small stores just yet to buy a pair of the new shoes. However, the Fleet Shoe will be available in some sizes within a year as stocks of the old types run out.

As compared with older types of footgear, the new shoes will cost about one dollar more per pair. They are expected to save the government over $200,000 a year through the consolidation of Navy footwear inventories.

Sees Through Steel

A 25-million-volt betatron will be used by the Navy for X-ray examination of the solid propellant being produced for its *Polaris* missile.

The apparatus will be installed some time this summer at the Allegany Ballistics Laboratory, near Cumberland, Md. The laboratory, a Navy installation administered by a private firm, has been operated for the Bureau of Ordnance since 1945.

While the betatron is an accepted tool for industrial, medical and research work, its use at Allegany Ballistics will be its first application to the missile field. It will be employed to check the quality of propellant grains by sending high-energy X-rays through the rocket motor to create an image of the section on film.

The instrument should cut down considerably on inspection time. For example, with the 25-million-volt betatron, it is possible to make an exposure through an eight-inch section of steel in only 90 seconds. The same operation, with a two-million-volt Xray machine, would take 20 minutes. And, with a cobalt source of 50 curies' strength, it would take nearly two days.

For operating flexibility, the betatron will be suspended from the ceiling by twin telescoping tubes and set up so that it can be rotated on both its vertical and horizontal axes.

Two Veteran Carriers Beached

Taps have been sounded for two more veterans of World War II. The utility aircraft carriers USS *Cape Esperance* (CVU 88, ex-CVE) and USS *Windham Bay* (CVU 92, ex-CVE) have been decommissioned.

The two fighting ships secured their logs during ceremonies at the Naval Supply Center, Oakland, Calif., where they had been sent to be stripped of stores, supplies and equipment. After being decommissioned, the former MSTS transport carriers moved across the Bay to the San Francisco Naval Shipyard where

YESTERDAY'S NAVY

On 1 Aug 1941 the Naval Air Station at Midway Island was established. On 7 Aug 1789 a law was passed establishing the War Department, with the Secretary of War to have general supervision of naval and land affairs. On 9 Aug 1842 the United States and Great Britain signed a treaty agreeing to maintain warships off the coast of Africa to suppress the slave trade. On 16 Aug 1943 USS *Intrepid* (CV 11) was commissioned at Newport News, Virginia. On 22 Aug 1940 James V. Forrestal became first Under Secretary of the Navy.

they will be prepared for disposal.

Cape Esperance was originally commissioned 9 Apr 1944 as a *Casablanca*-class escort carrier. She supported the World War II effort in the Pacific by transporting replacement personnel and aircraft to island bases and by delivering combat ready aircraft to Task Force 38 during the closing phases of the war.

With her wartime duties completed, *Cape Esperance* was inactivated in August 1946 and remained in the Reserve Fleet until August 1950, when she was recommissioned and assigned to the Commander, Military Sea Transportation Service, Pacific Area as a transport carrier.

Throughout the Korean fighting and the years that followed, the ship transported aircraft, personnel and general cargo throughout the Pacific and Far East. She also made trips to the Mediterranean and Indian Ocean areas.

The last year of the *Cape's* commissioned life is typical of the services she has rendered in years gone by. During the period 6 Dec 1957 to 22 Dec 1958, she transported 422 Navy, Air Force and Army aircraft, miscellaneous general cargo and military passengers. During her final year of service *Cape Esperance* was at sea away from her home port (San Francisco) 271 days and steamed over 90,000 miles while delivering over 201,800 measurement tons of cargo to U. S. defense installations in the Pacific.

Windham Bay was launched in March 1944 and served in World War II transferring aircraft to the armed forces in the Pacific. She was inactivated and placed in the Reserve Fleet at Tacoma, Wash., in January 1946. Shortly after the invasion of South Korea, *Windham Bay* was recommissioned (Oct 1950) and began operating as a utility carrier for MSTS.

The decommissioned *Windham Bay* and *Cape Esperance* are being replaced by the utility aircraft carriers USS *Core* (T-CVU 13) and USS *Breton* (T-CVU 23), which had been in the Reserve Fleet at Bremerton, Wash., until several months ago when they were overhauled and placed into service.

OFF TO COLLEGE—R. L. Himarger, ET1, member of USS *Castor* (AKS 1), congratulated on selection for Navy Enlisted Advanced School Program.

Flying *Skipjack*

USS *Skipjack*, SS(N) 585, which shattered all submarine speed records on her builder's trials, has been commissioned at Groton, Conn.

The sixth nuclear-powered sub, this 2850-ton underseas ship is the first of a series of seven high-speed attack submarines.

She represents a union of the teardrop hull with a nuclear engine. With these two features, SS(N) 585 will actually "fly" underwater as an airplane flies through the air. She will be able to cruise submerged at speeds in excess of 20 knots.

Every projection of *Skipjack* has been eliminated except her thin, dorsalfin-like fairwater (the submarine's sail on superstructure). Her round hull has a minimum of flat deck surface and her diving planes are built into the fairwater instead of the hull.

Skipjack's top speed is achieved by means of a single propeller. All the other active nuclear-powered submarines, and all conventional subs (except USS *Albacore*, AGSS 569), are driven by twin screws.

Skipjack, under the command of Commander William W. Behrens, Jr., USN, of Harrisburg, Pa. has joined USS *Nautilus*, SS(N) 571, and USS *Skate*, SS(N) 578, in Squadron 10 of the Atlantic Fleet Submarine Force at New London, Conn.

More for ASW Arsenal

The Navy has unveiled three of its newest antisubmarine weapons—a new lightweight homing torpedo and two aircraft-launched mines.

The new fish—a Mark 44 torpedo—is actually a small, versatile underwater missile which has improved characteristics over others now in the Fleet and is capable of attacking faster targets at greater depth.

The Mark 44, like its smaller sister the Mark 43, is an electrically propelled target-seeking torpedo. It can be launched from aircraft and surface ships. It was introduced to the Fleet for evaluation in April.

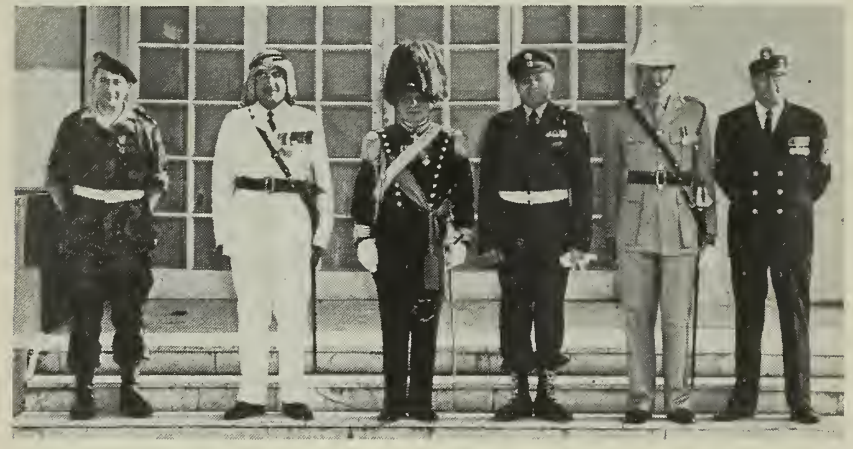
BOW ON — USS *John S. McCain* (DL 3) makes way through waters off Point Loma, San Diego, California.

The two new mines, Mark 52 and Mark 55, can be launched from the latest high-speed aircraft at extremely high altitudes with pin-point bombing accuracy. Both are sea mines. They lie on the bottom when planted and are difficult to sweep.

The Mark 52 has been approved for service use and is in full production at the Naval Weapons Plant, Washington, D. C. The Mark 55 is scheduled for Fleet evaluation next fall and is scheduled to become operational about June 1960. It is now in the prototype production phase.

BOOK TIME—G. W. Hillman, AT1, of AEWRON Thirteen, NAS Patuxent River, with books selected for Navy Enlisted Advanced School Program.

'DIPLOMUSICAL'—Navy band, Commander Naval Activities, Italy, marches in Bari, Italy, Festival of Military Bands. *Below:* Band leaders participating in Festival: French (Paratroops), Jordan (Army), Italy (Carabinieri), Greek (Army), British (Royal Marines), and Chief Musician W. W. Shelton, USN.



SCAR Makes Its Mark

Celestial navigation has been used by mariners ever since man first started sailing the seas. But how do present-day submarines manage to navigate while submerged? The answer can be found in the navigation system now used. It is called "SCAR"—short title for Submarine Celestial Altitude Recorder.

Of course, the ideal, always-reliable method of navigating, and of checking the accuracy of inertial and other advanced systems, is to take a celestial "fix." But if a submarine surfaces to do this, it involves the risk of exposure to the enemy. SCAR has solved this problem.

The value of SCAR was demonstrated by the record-breaking submerged voyages of the nuclear-powered submarines *Nautilus, Seawolf*, and *Skate*. Fitted into the periscope, SCAR made it possible for these submarines to use the time-tested system of navigating by the sun and the stars without having to surface.

A celestial fix can be taken with SCAR from periscope depth. When the star, moon or sun is sighted a switch on the scope is pressed, and the exact altitude of the celestial body is measured automatically, giving the angle of sighting in degrees and minutes as well as the time in hours, minutes and seconds. This information is printed instantaneously on a slip of paper which looks very much like the bill you get in a supermarket at the check-out counter. The timing device used in SCAR is accurate to within a second a day.

After two or more stars have been sighted through the periscope, all the navigation officer has to do is consult the Navy almanac and work out a fix on a chart. The point where the lines of the star fixes interesect indicates the position of the ship.

It has been pointed out that the importance of SCAR is self-apparent. With the development of the snorkel and atomic power, it became possible for submarines to remain submerged on extended trips such as the 60-day record set by *Seawolf*. Using advanced navigation equipment, such as SCAR, modern sub's now can navigate anywhere without surfacing.

Diplomusical Mission

The "Swinging Ambassadors of Goodwill" have completed a successful "diplomusical" mission to Italy, where they appeared in company with top bands from five other nations during the Bari Festival of Military Bands.

Officially, the "Ambassadors" are members of the Navy band assigned to Commander Naval Activities, Italy. However, they play most of their assignments under the banner of Commander-in-Chief Allied Forces Southern Europe.

Led by Chief Musician William W. Shelton, USN, the band took part in the two-day festival along with bands from France, Jordan, Greece, the United Kingdom and Italy. The appearance of the bands in Bari Stadium was witnessed by about 75,000 people. An outdoor concert, held on one of Bari's main waterfront thoroughfares, also attracted approximately the same sized crowd.

Festivities in the stadium began with the appearance of Italy's Bersaglieri Band, whose members are noted for their ability to run, in step, while playing their instruments. After that, each band marched in separately, playing characteristic music of its country.

Most of the bands had 50 men or more, ranging up to 120. The Ambassadors made a big hit although they numbered only 23 men.

Chief Shelton relinquished most of the time allotted his group for an appearance midfield so that the bigger bands could have more time for their precision marching demonstrations. But, the group's renditions of "Funiculi Funicula" (which had the crowd clapping in time to the music) and 'Santa Lucia" earned them an ovation as they retired from the center of the field.

Although bad weather spoiled part of the outdoor concert, heavy rain failed to dampen the spirits of the crowd, which reacted very enthusiastically when the Navy band swung into a special arrangement of the popular Italian "Piove." At Chief Shelton's suggestion, the audience joined in to sing the words of the second chorus.

The band also took part in street marches and public concerts in various parts of the city, and gave an impromptu concert for the 500-man garrison of the 9th Infantry Regiment of Italy. The regiment treated the band members to refreshments

in the officers' mess and presented them with small medals bearing the regimental insignie.

On all its marches the band was preceded by a four-man Marine Corps color guard.

At a special luncheon, Chief Shelton and each of the other bandmasters was given a gold medal and a model of a sailing galleon which is the symbol of Bari.

This was the Navy band's second appearance in Bari, as they took part in the initial festival held last year.

The band has performed practically all over Europe—from as far north as London to southern Italy.

Rocket Plane

The X-15 Rocket Plane, being developed as a joint Navy-Air Force—National Aeronautics and Space Administration venture, has successfully completed its first free-flight test.

This 50-foot, bullet-shaped plane made an unpowered five-minute glide to earth from an altitude of seven miles after it had been released from a B-52 "mother" plane.

The *X-15* has been designed to fly at speeds up to 4000 miles an hour and at altitudes of 100 miles or more—four times the present altitude record.

The free-flight tests were made after four "captive" flights on which the rocket plane was slung under the right wing of the jet bomber. The *X-15* was designed for aerial launchings and unpowered landings to save fuel.

The first flight was considered a critical test of the stability and control of the craft, the product of a four-year research program that has cost about 100 million dollars.

Lex Gets Bullpup

USS *Lexington* (CVA-16), at present operating in the Western Pacific, is the first carrier equipped with the Navy's newest operational guided missile—the air-to-surface *Bullpup*.

Aboard *Lexington* is Attack Squadron 212, home-based at Moffett Field, Calif. The supersonic *Bullpup* will be launched from its FJ-4B *Fury* jets.

Bullpup is an inexpensive and highly accurate non-nuclear missile to be used in close air support against comparatively small targets such as pillboxes, tanks, truck convoys, bridges and railroad tracks. Its accuracy and range will allow pilots to attack from higher altitudes than was previously possible, thus avoiding enemy small arms and low-altitude antiaircraft fire.

Power-driven by a solid-propellant rocket motor, designed by the Naval Propellant Plant, Indian Head, Md., *Bullpup* is guided by command control from its launching plane. Control surfaces are located in the forward part of the missile, and stabilizing surfaces are aft.

The 540-pound, 11-foot long missile also carries two flares which enable the pilot to keep it in line of sight, under command control, until it hits.

Bullpup is the first guided missile which requires no checking from factory to firing. It can be loaded into a plane as easily and quickly as a bomb or rocket, and is handled and stowed with normal shipboard equipment.

Next carrier scheduled to receive *Bullpup* is the Atlantic Fleet's USS *Saratoga* (CVA-60). Five other guided missiles, in addition to *Bullpup*, are in active service with the U. S. Fleet. They are the air-to-air *Sidewinder* and *Sparrow III*, surface-to-air *Terrier* and *Talos*, and surface-to-surface *Regulus I*.

Sliced Bayonne

Navy bakers can now look forward to shorter hours over their ovens. The U.S. Naval Supply Research and Development Facility, Bayonne, N.J., has developed a new breadbaking process that takes about half the time normally required.

Known as the Bayonne bread formula, the process produces a loaf that, while more nutritious and less fattening, is as palatable as that baked by present methods.

Mass shipboard production of white bread now requires from five to six hours. The Bayonne formula reduces that time to two or two-and-one-half hours. Two bakers can turn out an average of 160 loaves an hour.

In standard production, six steps are necessary, with equipment for each, they are:

The mixing stage.

The proofing stage, during which dough stands for about 20 minutes before it starts to ferment.

The fermentation stage, in which yeast causes the dough to expand.

The dividing stage, where dough is separated into portions.

The molding stage, in which dough is shaped into loaves.

The baking stage.

By increasing the dough temperature, yeast content, shortening and dry non-fat milk, and decreasing the water, salt and sugar, a dough has been developed that eliminates the proofing and molding stages. This in turn eliminates the equipment needed for those stages.

MID-RIFF — *USS Proteus* (AS 19) lies in drydock at Charleston, split in half to add new midsection that will equip her with special shops and gear to serve as a Fleet tender to the Navy's first squadron of nuclear submarines.

Navy Cowhands

"Hitting the deck" is common to all Navy men. But 11 airborne sailors at NAAS Chase Field, Beeville, Texas, made headlines when they hit the deck other than in the traditional manner.

They were literally "decked" when they attempted to ride bareback "the meanest and wildest" broncs and Brahma bulls available during Chase Field's first benefit rodeo conducted during the recent Navy Relief fund raising campaign.

A total of 12 sailors participated in the rodeo, and one of them went the limit. The other 11 didn't go into orbit, but as one professional rodeo performer put it, "it was raining cowboys during the Navy events."

The title of "Chase Field's Top Cowhands," went to G. E. Graham, AA, USN, and G. E. Lueders, AM3, USN. Graham took top honors in the bull-riding event. He had previously ridden in three rodeos. Lueders, on the other hand, won the bareback riding event during his first attempt at rodeo riding.

ASW Convoy Escort Exercise

Navy and Coast Guard units of the Atlantic Fleet participated in *Convex Two* a joint week-long ASW convoy escort exercise that was held off the East Coast.

Participating Coast Guard units included the 311-foot tenders USCGC *Chincoteague,* (WAVP 375); *Absecon* (WAVP 374), *Yakutat* (WAVP 380) and *Mackinac* WAVP 371).

Among the naval units were the oilers USS *Canisteo* (AO 99) and *Pecatonica* (AOG 57) the ships of DESRON 20; aircraft of PATRONS Eight and 56; and the blimps of ZP Three.

In addition, four Naval Reserve destroyers—USS *Miller* (DD 535), *Bearss* (DD 654), *Clarence K. Bronson* (DD 668) *and Robinson* (DD 562)—joined the regular Navy and Coast Guard units for the ASW training.

"Opposition" was provided during the operation by the conventional-powered submarines USS *Jallao* (SS 368) and *Hardhead* (SS 365).

George Washington Launched

The first of nine Fleet ballistic missile submarines that have been authorized to date was launched in June. This nuclear-powered, *Polaris*-missile launcher has been designated SSB(N) 598 and has been named USS *George Washington.*

She is 380 feet long and displaces about 5400 tons light and 6700 submerged.

George Washington has 16 vertical tubes for firing the solid-fueled, 1500-mile *Polaris* missiles from the ocean depths or on the surface. She is also fitted with a conventional torpedo-firing system for attacking surface ships or enemy submarines. This ballistic missile sub will also be equipped with SINS (Ships Inertial Navigation System).

George Washington is scheduled to be commissioned in December and will become operational in 1960, when the solid-propellant, inertially-guided *Polaris* is also scheduled to become operational.

A Great Time Was Had by All

Put a couple of hundred youngsters together with an equal number of Seabees and turn them loose for a day. Add some sports activities, a band, good food and a tour of Navy facilities. The combination is guaranteed to be a sure hit.

This was the successful recipe for Guam's first Seabee "Buddy Day," held at the Paseo de Suzana at Agana. And as one hefty Seabee put it, "We started out to entertain the youngsters, but when it was all over, it was hard to tell who was being entertained."

The Seabees, all attached to MCB-11, first took the wide-eyed youngsters for a firsthand look at heavy equipment in operation. Many took rides on bulldozers and bounced over the Seabee training course.

Next on the agenda was a tour through MCB-11 shops. At the Naval Station baseball field the Guam Little League played the Seabees in a rip-roaring contest. There were special rules for the Seabees. They were required to bat and pitch just the opposite from the way they normally would, run the bases backwards, and bat from a kneeling position.

Sparking the day's activities were the Guam Youth Drum and Bugle Corps, drill and judo teams. At the Navy's Gab Gab Beach the youngsters were served Navy chow with all the trimmings (beans included).

Each of the youngsters was presented with Junior Seabee T-shirts and the winners of boxing matches, tug 'o war and sack races were awarded appropriate prizes.

PASSING THE BUCK—Navymen down Chase Field, Texas, way hold a benefit rodeo for Navy Relief Fund.

More Sea Time Than Any Other Man in the Navy

Navyman Frank D. Oliva is 68 years old. At this age, you'd expect to find him enjoying retirement in an easy chair or weeding the garden. But this is not the case.

You're more likely to find him crawling from beneath a piece of machinery or climbing a vertical ladder from the engineroom of USS *Graffias* (AF 29), now with SERVPAC.

Oliva is a Chief Boilerman—he was advanced to Chief Watertender on 14 Sep 1929—who will complete 45 years' continuous active duty on 28 August. Forty-three of those years have been spent at sea.

He probably has more sea time than any other man in the Navy. He's one of the oldest Navymen, officer or enlisted, on active duty.

Chief Oliva is very active on the job. In a recent inspection, the boilers he maintains were given an "Outstanding." One inspector remarked that they were among the best he had seen in over 20 years.

One of the amazing things about him is that for the past 15 years he has been eligible for retirement on 75 per cent pay. He gains no money, either in longevity or for retirement, by staying on active duty. He is actually working for one-quarter pay, or just $87.50 more than he would receive in retirement. Yet, in June 1958 he reenlisted for another six-year hitch.

When asked why he hasn't retired with his pension, he replied, "Because I like to travel, like the Navy routine, the food, and the people, especially the men I work with. They keep me young and active." Many of the bluejackets who work with the Chief could, age-wise, be his great-grandchildren.

To talk to Frank Oliva about his naval career is like examining a page from naval history. His first personal participation in a naval battle was in 1915 while serving in the cruiser USS *Pittsburgh*. On one occasion, according to Oliva, the crewmen of *Pittsburgh* had ringside seats at a fight between two gunboats during a Mexican insurrection. "We were close enough to see the men on the gunboats

LONG TIME — Ribbons and hash marks denote 45 years' service of Chief Boilerman F. D. Oliva, USN.

load their cannons, close the breach, run back, and pull the string to fire them." During the same campaign he remembers being a part of a landing party sent from the cruiser to escort the U.S. Ambassador from his house to the ship for passage home.

Twelve years later he actively participated in the Nicaraguan Campaign. Since Oliva could speak Spanish he was selected to go ashore in that Central American country during the elections

ON THE JOB—Chief Oliva makes adjustment on gauge setting in the engineroom, *USS Graffias* (AF 29).

of 1928. He was sent on horseback to explain the democratic election process to the people who were voting. Oliva had to be careful not to influence the balloting. "It was a tricky business," the Chief recalled. "We were even sworn out of the Navy to do the job—and come to think of it, I can't remember being sworn back in."

Chief Oliva spent World War I on convoy duty in the Atlantic, and World War II in the Pacific. During the second World War, he participated in numerous operations, as evidenced by the 17 battle stars he rates on his Asiatic-Pacific ribbon. He is one of the very few servicemen still on active duty who wears the Victory Medal from both world wars. He also wears the Korean medals he earned while on shipboard duty in the Korean fighting. Yet with all his service through two world wars, he has neither had a ship sunk from beneath him, nor has he been wounded.

The Chief, who has served in 14 ships in his long naval career, says he would pick the Shanghai of 1916 as his favorite liberty port.

He still remembers counting 157 beans and five prunes for breakfast on board his first ship over 40 years ago. "Times have changed in that regard," grins Frank. "Now I have fresh fruit, ham and eggs, hot cakes, and just about everything I want for breakfast."

When asked about the difference between the boiler room of one of today's ships and of those when he first came in the Navy, Oliva says, "In 1914 when I enlisted, you had to be 21 years old to be a fireman and weigh 146 pounds in order to handle the slice bar we used to break up the coal fires."

Chief Boilerman Oliva, who remembers when Admiral Felix B. Stump, now retired, was an Ensign, has no set plans for the future—other than the Navy. He still has five years to go on his present enlistment, and wants to finish out 50 years of active service before retirement. Then, he says, he will probably go home to live with his 90-year-old mother.

THE WORD

Frank, Authentic Advance Information On Policy—Straight From Headquarters

• **SUBMARINE TRAINEES NEEDED**—If you're an EN, EM, IC, or ET, you are needed aboard a submarine. And one of four volunteers who graduate from basic submarine school will start training immediately for duty aboard a nuclear-powered submarine.

The other 75 per cent in those ratings will be assigned to a conventionally powered submarine. After you have qualified in a conventionally powered submarine, you can request nuclear-power training.

Although the need is not so critical as in the above group, men in the following ratings are also needed for sub training—TM, GS, FT, QM, RM, SO, and ET. They are particularly needed in Fleet ballistic missile submarines and conventional submarines. Some might be selected for nuclear-power training. (ETs are also listed in this group as they are needed in the nuclear engineering and operations departments of both nuclear-powered and FBM submarines.)

In the past many RMSNs have requested submarine duty. Few are selected. Since RMs aboard submarines are usually assigned watches alone, only rated radiomen are normally assigned.

A third group is also eligible for duty aboard submarines. This group includes YN, SD, CS, SN, and FN. Besides conventionally powered submarines, the best bet for these men is duty in Fleet ballistic missile submarines. A few may be assigned to SS(N) types.

And again like the radiomen, billets for yeomen are filled only by rated personnel. There is usually only one YN2 or YN1 aboard each submarine. At the present time there is a long waiting list for yeomen to attend submarine school.

If you are in one of the above ratings and are interested in submarine training take a look at BuPers Inst. 1540.2C (CH-1), NavAct 2, and BuPers Inst. 1540.33B, plus any current BuPers notices in those series.

• **NAVY UPS HOUSEHOLD GOODS PACKING MATERIALS DEDUCTION**—You'll get a better break in the shipment of your household goods in the future under a change to the *Joint Travel Regulations* dealing with allowances for packing materials when the *actual net weight* of the household goods isn't known.

The change, which went into effect 1 August, permits deduction of 40 per cent of the *gross weight* of your packed and crated household goods and 5 per cent of the gross weight of motor van shipments in determining the net weight. Under old regulations, deductions were 28.5 per cent for packed and crated shipments and 4.8 per cent for motor van shipments.

Let's take the case of a hypothetical PO1. He has been transferred from overseas to the U. S., and the movers were unable to weigh the goods at his isolated overseas station. It is impractical to separate the goods and packing material on delivery in the States, so the amount to be charged against his 5500-pound weight allowance must be figured from the gross weight of the packed and crated containers.

Under old regulations, his entire shipment, including the packing materials, could weigh only 7700 pounds. Now, however, the change allows this same PO1 to ship approximately 9150 pounds gross weight. Since it is usually necessary to pack and crate with sturdier—and heavier—materials overseas, our hypothetical PO1 is a lot less apt to be checked for going over his allowance as a result of the new change.

The allowance increases came into being because a Navy Bureau of Supplies and Accounts study of pay account checkages for overweight indicated that old allowances often were inadequate to cover the actual weight of packing and crating material.

The JTR change emphasizes that actual net weight will be used whenever possible and that the deduction allowance will apply only when it is impractical to obtain an actual weight.

• **IM RATING CHANGE**—The Secretary of the Navy has approved a change in the enlisted rating structure which redesignates the Instrumentman (IM) general service rating as a general rating in all pay grades.

Abolished by the change, in all pay grades, are the emergency service ratings of Instrumentman I (Instrument Repairman), Instrumentman W (Watch and Clock Repairman), and Instrumentman O (Office Machine Repairman).

Another effect of the change will be revision of the IM qualifications for advancement in rating, placing added emphasis on office machine repair capability. In the higher pay grades, qualifications will include knowledge factors governing watch and clock repair and instrument (gauges and meters) repair.

Personnel of the abolished emergency service ratings will be con-

JUST A DREAM—Pass this copy of ALL HANDS Magazine on . . . so that nine other Navy men can really read it.

verted to the IM general rating. Procedures to effect the conversion will be announced through Bureau directives.

Navy Enlisted Classifications IM-1812 (Instrumentman, Watch and Clock) and IM-1832 (Instrumentman, Instrument Repair) will be identified in complements and allowances. NEC IM-1822 (Instrumentman, Office Machines) has been dropped.

• **LATEST WARRANT SELECTIONS**—Four first class and thirteen chief petty officers recently received temporary appointments to Warrant Officer, W-1. (For more on warrants, see page 54).

The Regular Navy appointments, made from an eligibility list established by a selection board which convened last February, are broken down into the following designators:

Aviation Operations Technician (7112), one; Boatswain (7132), three; Surface Ordnance Technician (7232), one; Ordnance Control Technician (7242), one; Aviation Electronics Technician (7612), one; Communications Technician (7642), one; Electronics Technician (7662), two; Ship's Clerk (7822), one; Medical Service (8172), five; Civil Engineer Corps (8492), one.

• **PHILIPPINE MONETARY RESTRICTIONS**—Navymen headed for the Philippines would do well to take heed of the fact that the regulations on bringing money into that country have been changed.

Formerly, the regulations permitted up to $50 to be imported (as was stated on page 54 of the December 1958 issue of ALL HANDS). Now, however, that amount is restricted to a maximum of $10 or 20 pesos.

Taking more than $10 into the country is a violation of Philippine law.

• **PHOTO CONTEST WINNERS**—Navy Commander Edward C. Scully, USN, now assigned in Morocco, gave the U.S. Army a tough fight for the trophy in the Eighth Inter-Service Photography Contest. The Army took the contest, but CDR Scully single-handedly won five of the 18 awards the Navy got.

Besides taking first place in the color transparencies, portraits category, CDR Scully won fifth place honorable mention in the color transparencies, scenic category and - - in the black-and-white group - - he won third place honorable mention in the portrait category, fourth place honorable mention in the military life category, and second place honorable mention in the experimental category.

Only two other Navymen got more than one award.

Philip N. Dewing, PNC, stationed in Japan, won second place honorable mentions in the color transparencies, portrait category and the sports and action group.

The only other Navy multiple winner was Robert L. Lawson, PH1, who is assigned to Utility Squadron One in Hawaii. Lawson won third place honorable mentions in the black-and-white military life category and the black-and-white scenic group.

Single Navy winners in the color transparencies competition were: Richard H. Reno, PH1, Utility Squadron One, Hawaii, third place (portraits); William A. Johnson, PNC, U.S. Naval Station, Washington, D.C., fourth honorable mention (portraits); Malcom S. Norton, HN, U.S. Naval Hospital, Philadelphia, Pa., second place (sports and action); Albert Benavides, USS *Mullinnix* (DD 944), third place (military life); John J. Krawczyk, FTC, USS *Nautilus*, SS(N) 571, second place (experimental); Allan R. Westerberg, QM1, U.S. Naval Air Station, Minneapolis, Minn., second honorable mention (experimental); and LTJG Bernard H. Schenck, Headquarters Third Naval District, New York City, fifth honorable mention (experimental).

Single winners in the black-and-white photograph competition were LTJG Thomas M. Atkins, U.S. Naval Photographic Center, Anacostia, D.C., fourth honorable mention (portraits), and Robert J. Schoonover, PH2, U.S. Naval Station, New York City, third honorable mention (experimental).

The trophy won by the Army is a perpetual one, awarded on a point system based on the number and place of winning entries.

Inter-service photography contests are conducted every 18 months with one service acting as host on a rotational basis. Each service conducts its own contest first, and then winning photos are entered in the all-service finals, the big competition.

QUIZ AWEIGH

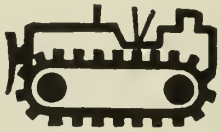
Here are a few questions on odds and ends of Navy facts ranging from the latest class of carrier to specialty marks. Give them a try and see what you can do. Good Luck and smooth sailing.

1. Here's the 54,600-ton, 1039-foot USS *Forrestal* (CVA 59) that was commissioned in October 1955. There are now three somewhat larger sisterships of the *Forrestal*-class attack carriers in commission and two more are being built. The Navy's newest aircraft carrier—the fourth of the *Forrestal* class to be commissioned—is (a) USS *Independence* (CVA 62), (b) USS *Kitty Hawk* (CVA 63), (c) USS *Constellation* (CVA 64).

2. Who takes care of countless ladders aboard this gigantic ship? (a) The men who clean the compartment at the top of the ladders, (b) the men who clean the compartment at the foot of them, (c) special cleaning details.

3. A chief petty officer is required to wear miniature medals with (a) service dress blues, (b) dinner dress, (c) full dress (d) none of these.

4. According to *Uniform Regs*, Half-Wellington boots or buckle shoes may be worn by (a) all male officers and enlisted personnel, (b) all male officers, CPOs and PO1s, (c) male officers and CPOs only, (d) none of these.



5. This is the specialty mark for an/a (a) EO, (b), CM, (c), BU.

6. Personnel with this rating would be in rating group (a) IV, (b) VI, (c) VIII.

To find out how you scored on this month's Quiz Away turn to page 51 and you will find the answers.

THE BULLETIN BOARD

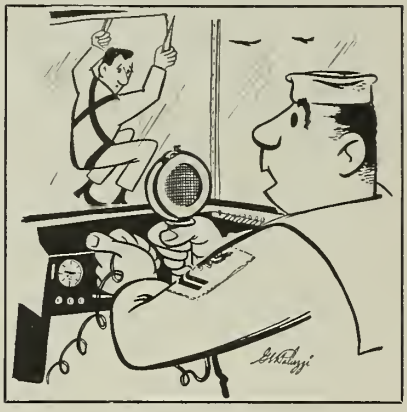
If You're Headed for Kodiak Don't Leave Your Camera Behind

KODIAK ISN'T AS BAD as you've been led to believe. Rumors to the contrary have undoubtedly been inspired by rival Chambers of Commerce. Such, at least are the claims of Kodiak enthusiasts. That relatively small group insists that "this beautiful little island with its rugged mountain scenery is warmed by the Japanese Current, which is enough to give it the reputation of being the 'banana belt' of Alaska." The winter climate is less severe than that of Illinois, for instance, and the summer season is very pleasant.

We can't give a firsthand account of the Kodiak attractions because we haven't been there, but here's the picture according to the PIO of the 17th Naval District:

The city of Kodiak is located seven miles from the naval station and has a population of about 4000. There are several small department stores, grocery stores, restaurants, dress shops, beauty parlors, a furniture store, theater, bank, small hotel and sundry other establishments, including gas stations and some garages. The principal industry is fishing. Prices average approximately 25 per cent above prices in continental U. S.

Climate: The climate in Kodiak is comparable to that of the Puget Sound area in the Pacific Northwest. The temperature ranges from a winter low of about seven degrees below zero to a summer high of about 80 degrees. Average winter temperature is 34 degrees and summer 52 degrees. The most difficult feature is the occasional storms with high winds that are called "williwaws." From November to April the hours of darkness are long, and rain, snow and fog are plentiful. Because of the rain (60 inches yearly average) and frequent moderate temperature, the snow does not generally accumulate in the living areas but does remain in the surrounding mountains. During the four-month summer, the hills are green and flowers are plentiful throughout the island.



"Do you have a clearance to land?"

Entry Approval for Dependents: Entry approval into Kodiak and concurrent travel of dependents are controlled by the Commandant, Seventeenth Naval District. Entry approval and dependent travel are not authorized until government quarters on the naval station, or approved housing in the city of Kodiak, is available.. If you want to request concurrent travel and entry approval for your dependents, send a speedletter or message to the Commandant, Seventeenth Naval District, Box 14, Navy #127, c/o Postmaster, Seattle, Wash. The following information must be furnished:

- Name, rank/rate, file/service number.
- Authority for transfer.
- Duty station to which ordered in Seventeenth Naval District.
- Number of dependents, sex and age of dependent children.
- Number of bedrooms desired.
- Estimated date of arrival at Seattle (port of embarkation).
- Permission to ship household effects and privately owned vehicle.
- Request for government housing. If government housing is not available state whether you agree to accept housing in the Aleutian Homes project. (See below.)

If you are assigned on-base government housing, an information circular on the type of housing assigned will be forwarded via mail after receiving your approval dispatch. From this circular, you can determine what household effects to ship to Kodiak and what to place in storage.

Upon receipt of authority for entry and approval for concurrent travel of dependents, you must submit an original and four signed copies of DD Form 884, together with five certified copies of orders, to the Commandant, Thirteenth Naval District (Code 114) in order to arrange for transportation. In addition, forward one signed copy of DD Form 884 and one certified copy of orders to the Commandant, Seventeenth Naval District (Code N-1).

Because of the high cost of living in Seattle, your family should not plan to arrive there until notified that entry into the 17ND is authorized. Authorities in Seattle (Com 13) will not embark dependents until they receive authorization for entry from Com 17. If you do not want to bring your dependents, you are entitled to move them and your household effects to a place designated by them in accordance with Article 7005, *Joint Travel Regulations.*

Government Transportation: Most military personnel travel to and from Kodiak by government air or surface at government expense. Travel for dependents from Seattle to Kodiak is controlled by Com 13. He will decide the mode of transportation to be used. If government transportation is not available, he will authorize commercial air. If such is the case, you will be required to pay a nominal charge for subsistence while in transit.

Although increasing numbers of military personnel and dependents travel back to the States via the Alcan Highway, there are not too many who come up that way. However, it is possible, and those who make the trip generally enjoy it.

Automobiles should be fairly new and in tip-top mechanical condition. New tires are almost a must because of the gravel surface of the road most of the way. Most major oil companies can furnish travel and tourist information regarding the Alcan Highway.

Those planning to drive up should contact the Military Sea Transportation Service Office at Elmendorf Air Force Base, Anchorage, Alaska, well in advance, to make arrangements to have their automobiles shipped from there to Kodiak.

Transportation for dependents from Anchorage to Kodiak can be arranged by contacting MSTS for shipboard transportation.

At present, travel claims on a mileage basis for Alcan Highway travel are being paid, but are based on the air miles from Seattle to Anchorage. The payment on a mile age basis for travel in the United States remains unchanged. If you want extra time for driving the Alcan Highway part of the trip (250 miles per day), be sure to request it from the Chief of Naval Personnel well in advance.

Luggage Limitations While Traveling: *Air Travel*-Normally, luggage is limited to 65 pounds per person. The Chief of Naval Personnel may be requested to authorize excess allowance in basic orders. Hold baggage should be sent to the Naval Supply Depot, Seattle, for shipping via MSTS, approximately three weeks before your departure by plane, to assure its early arrival at your duty station.

Ship Travel-Hand luggage, limited to two suitcases per person, may be kept in staterooms. Trunks and foot lockers are carried in the hold of the same ship and are referred to as "hold baggage." It is a good idea to stencil your name, rank, serial number and destination on two sides of foot lockers and trunks. Tags are sometimes torn off during loading and unloading.

Pets: So far as possible, transportation at no cost to the government will be furnished for household pets of personnel authorized to travel in MSTS ships.

Household Effects: As soon as you receive your orders, you should contact the Household Effects Section of the Supply department at the nearest naval activity for information regarding shipment of privately owned vehicle, personal effects and household goods. (BuSandA Publication 260, entitled "Household Goods Shipment Information," contains the information you need.) You are allowed to ship 500 pounds of household effects via express to Kodiak at government expense from your last duty station. This shipment should include necessary essentials such as linens, silverware, china, kitchen utensils and other light equipment which you will need for housekeeping immediately after arrival at Kodiak.

A limited amount of china, kitchen utensils and other essentials is available until arrival of the rest of your household effects.

A deep freeze is considered a very desirable convenience for frozen meats, milk and other foodstuffs which are usually available only during limited periods (ship arrivals). If you don't have one, a freezer may be purchased from the Navy Exchange. An upright freezer should be considered since its saves floor space.

There are no commercial storage facilities for household goods at Kodiak. Government storage facilities are limited and are not of standard quality. Therefore, particular attention to the type of housing you will occupy will determine what items to ship and what to place in storage. If you are going to live in station housing, the Navy will provide storage in locations other than Kodiak at government expense. Apply to the nearest household effects shipping activity for the required

WHAT'S IN A NAME

Hueneme

Port Hueneme (Why-nee-me) is famous throughout the Navy as the advanced depot through which thousands of Seabees and hundreds of thousands of tons of equipment were funneled into the Pacific during World War II.

It's equally well remembered by thousands of ex-servicemen as the base through which they were processed for discharge under the "Magic Carpet" program in late 1945.

Today it's the site of the Naval Construction Battalion Center, home base for all our Pacific Mobile Construction Battalions.

Not so well known, though, is the fact that a naval activity was in operation at Point Hueneme long before it became a port.

In September 1920, a Naval Radio Compass Station was established at the Point to receive and transmit messages with a radius of 50 miles.

The station occupied some 23 acres, but had no definite boundaries. Permission to occupy the site was granted by the Lighthouse Service of the Department of Commerce.

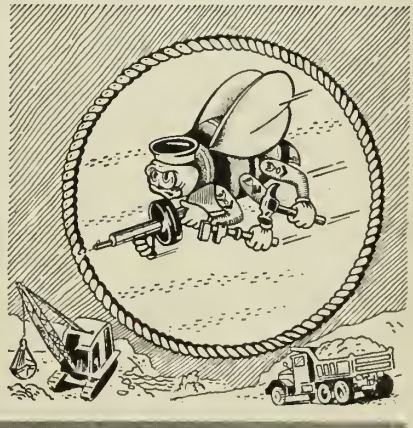
A 10-by-18 foot direction-finder house had been built in 1919, and between then and 1927, ten one-story buildings were costructed. They included a dormitory, pumphouse, powerhouse, two storehouses, garage, chemical engine house and quarters for the radioman in charge. Two 50-foot ship masts supported a flat-top antenna.

The station also boasted an artesian well, a 5000-gallon elevated tank for water storage, 100 feet of paved streets and 30 feet of paved sidewalks. Gas radiators supplied heating.

By 1927 the facility had been re-designated a direction-finder station. It continued to serve in that role until it was discontinued, along with several similar activities, in October 1931.

During those years, and continuing through the 30's, what is now one of the finest deep-water ports on the West Coast was a tidal marsh surrounded by truck gardens.

The Oxnard, Calif., Harbor District Board began work on the harbor in 1937, but development into the present bustling port really began in 1942 when the Navy acquired the harbor and surrounding lands.



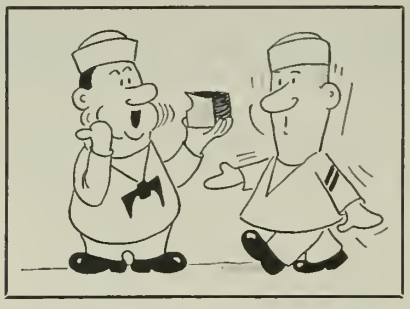
forms. The shipping officer will designate the storage location. Storage is authorized until you return from overseas duty. Your entitlement to additional storage after you return will be determined by your new duty assignment.

Housing: All married officers, married enlisted men in pay grade E-4 with over four years' service, and all personnel in higher pay grades are eligible for government quarters. Housing on the naval station, however, is limited, with government quarters available for only about 40 per cent of the eligible personnel.

Four-Plex Quarters — These are two-story buildings. Some are available to officers, and others to enlisted personnel. They are located on the station within walking distance of most facilities. They are completely furnished with electric range, water heater and refrigerator. Some are also equipped with a full basement and they have ample storage space. Linen and cooking utensils are not provided. Officers' quarters are equipped with automatic washers and dryers. Enlisted men's quarters are equipped with washers and drying rooms.

Duplex Quarters—Certain of these are available to officers, and others to enlisted personnel. They are located on the station within walking distance of most facilities. They are completely furnished with electric range, water heater, refrigerator, automatic washer and dryer. Linen and cooking utensils are not provided.

D. J. Majchrzak, DN, USN



"Say, that's a good cake your mother just sent you. The guys are serving it up now."

Lake Louise Public Quarters—These are single-story and are occupied by officers. They are located on the station about three and one-half miles from the administration building. They are completely furnished with electric range, water heater, refrigerator and automatic washer and dryer. Linen and cooking utensils are not provided.

Lake Louise Rental Housing — These are single-story, duplex type and occupied by officers. They are also located on the station about three-and-one-half miles from the administration building. Rent is $50.65 per month. Telephone, furnace oil and electricity charges vary with individual families. They are furnished with oil furnaces, electric ranges, water heaters and refrigerators. A community wash house, equipped with two automatic washers and dryers, is provided. Linen and cooking utensils are not provided.

Low-Cost Defense Rental Housing—These housing units are occupied by enlisted men and are located on the station, within walking distance of most facilities. Rental is the same as Lake Louise rental housing for two-bedroom units and proportionately higher or lower for three- or one-bedroom units, and are of single-story, duplex type. They are furnished with oil-burning kitchen ranges, oil furnace and hot water heater combinations and refrigerators. Washers, dryers, cooking utensils and linens are not provided. Privately owned washers and dryers may be installed without cost.

Aleutian Homes—In the city of Kodiak, there is a 342-unit housing project (Aleutian Homes) which has helped to lessen the housing shortage. These units consist of two bedrooms without garage, unfurnished except for refrigerator and gas stove, rent for $110 monthly; two bedrooms with garage, unfurnished except for refrigerator, gas stove and clothes dryer, rent for $130 monthly; and three bedrooms with garage, unfurnished except for stove, refrigerator, semi-automatic washer and clothes dryer, rent for $150 monthly.

For those accepting these units, the Commandant is able to authorize shipment of household effects and concurrent travel of dependents. However, you are advised to have at least $300 available to cover the initial occupancy charges.

The cost of utilities for these units averages approximately $85 per month.

In addition, a limited number of privately owned houses are available for rent in Kodiak.

Roads: The only paved roads are on the naval station, between the station and town and in the city of Kodiak. The others are gravel, composed of sharp rock which promotes bruises, cuts and punctures to automobile tires unless they are relatively new or heavy tread snow tires. Winter travel is generally confined

A Solution to Problem of Uninvited Guests

"Shipboard Pest Control" (MN-8722) is the title of a new training film that has been distributed to District Training Aids Sections and Libraries, and selected key stations.

This new film has been prepared for all personnel concerned with preventive medicine. It presents three points of an effective pest-control program: prevention of entry, destruction of pests already aboard, and good housekeeping to prevent breeding of pests in shipboard spaces.

The picture summarizes methods of pest destruction and reviews fumigating, trapping, poisoning and dusting methods. It then presents in detail the principles and techniques of space spraying and residual spraying as applied against appropriate pests in specific locations. Throughout the film, precautions for the safety of personnel engaged in the work of extermination are emphasized.

Although this film was planned for use aboard ship and by the Navy's Preventive Medicine Units in their work with the Fleet, its subject matter will have equally useful application at shore stations. Personnel concerned with environmental sanitation in hospitals, barracks and at messing facilities should find this film beneficial.

If prints of this new film are not available from your usual source, write to the Film Distribution Unit, Training Division, Bureau of Naval Personnel.

to the road between the station and Kodiak.

Automobiles: Automobiles are necessary. Government transportation is limited and strictly controlled. Private cars may be transported from Seattle to Kodiak via MSTS ships free of charge for all military personnel. Personnel in pay grade E-4 with over four years' service and all personnel in higher pay grades are authorized to ship their automobiles on a "space-required" basis. Personnel in pay grade E-4 with less than four years' service and all personnel in lower pay grades are authorized to ship their automobiles via MSTS ships on a "space-available" basis. *The Naval Supply Depot, Seattle, will not accept automobiles for shipment with outstanding liens without written permission from the lien holder.*

Cars should be solid, sensible types and in excellent mechanical condition. Garage facilities and parts are very limited. Snow tires or chains are advisable, since frequent icy road conditions exist from December through March. Gasoline and oil are available on the station at prices comparable to those in Seattle.

Schools: Grade school children (kindergarten through the eighth grade) living on the station go to the station school while those living in Kodiak attend the city schools. An average of 400 students attend the station school.

High school students attend the new Kodiak High School, and free bus service is provided from the station. The maximum amount of individual help and attention is given all pupils, permitting the Kodiak school system to compare favorably with those in the United States. The high school is fully accredited and equipped with facilities for chemistry and physics.

A Catholic grade school is maintained in Kodiak. The curriculum provides instruction for children in the first through the eighth grades.

Churches: Chaplains conduct a full program of services and religious education on the station and arrange regular services for groups of various denominations. Many servicemen and their families attend churches in Kodiak.

Food: The Commissary and Navy Exchange carry adequate stocks and

Living Conditions pamphlets on many overseas duty stations may be obtained from the Bureau of Naval Personnel (Attn: Pers G221) Washington 25, D.C.

are conveniently located. The Commissary stocks a full line of meats, canned goods (including baby food), dairy products, staples and frozen foods as well as fresh fruits and vegetables when obtainable.

Personal Effects: Kodiak is not a perennial icebox and your present wardrobe, with some additions, should prove adequate.

The over-all emphasis should be on fall clothing because the summer is rarely hot and the winter rarely cold. A warm overcoat is a must item, as are heavy-soled walking shoes, raincoat and galoshes. Heavy clothing is not needed for daily routine living, but sessions at the Ski Chalet or overnight camping trips make it advisable to bring woolen suits, sweaters, woolen socks, warm gloves, woolen scarfs and ear muffs. For a child, a ski suit is an ideal garment.

Since much of the recreation at Kodiak includes outdoor excursions shoe packs with rubber bottoms, hip boots and chest-high waders for fishing trips are highly recommended. Down- or alpaca-lined three-quarter length parkas are desirable as protection against the cold winds. Although these items may be purchased locally, it is advisable to bring them, since there is a limited selection of sizes and styles in available stock. Special orders from the States take approximately a month for delivery. Local prices, except for the Navy Exchange, are approximately 25 per cent higher than in the continental U. S.

Generally speaking, the accent is on informal dress. Slacks are often the uniform of the day for women, and men usually wear jackets and sport shirts. However, evening gowns and dinner jackets are desirable for occasional formal parties.

Bring along a radio and your television set. All radios and TVs will pick up the local AFRS and AFRS-TV. Many stateside stations may be heard over shortwave radios, with the reception especially good during the winter months.

Recreation Facilities: *Hunting* — Big game hunting on the island of Kodiak is limited to deer and Alaska brown (Kodiak) bears. On nearby Afognak Island, elk is available. Bird (ptarmigan) and rabbit hunting is also available. Migratory waterfowl shooting opportunities can be described as fair to good—Kodiak is not in a major flyway zone. A federal duck stamp is required. However, your hunting is not limited to the immediate Kodiak area as many military people take leave and arrange for hunts in other parts of Alaska, where many types of big game are to be found. Among these are goat, sheep, moose and brown (Kodiak), grizzly, polar and black bears, elk, caribou and deer. So, if you are a hunting enthusiast, bring your shotgun and rifle. If you do not already own a gun, one may be purchased from the Navy Exchange or in the city of Kodiak.

Fishing—If the hunting on Ko-

NOW HERE'S THIS

Four Generations

In 1884 Frank Dempsey, a recent arrival from Ireland, enlisted in the Navy at New York City. He retired 30 years later as a Chief Sailmaker.

In 1906 his son, Edward Dempsey, enlisted. He made his first cruise around the world with the Great White Fleet and later, was a plank owner in USS *Pennsylvania* (BB 38). When he retired in 1927 he was a Chief Watertender in *Pennsylvania*.

Now, another Dempsey, Frank's grandson, is carrying on the family tradition. He is Donald V. Dempsey, a Chief Commissaryman with 15 years of service.

His son, Jack, 17, is already in the Naval Reserve, and plans to go on active duty when he graduates from high school. He, too, plans to make the Navy a career. —Samuel F. Smith, JO3, USN.

diak is good, the fishing is fantastic! Don't brag about fishing elsewhere until you have tried it here. Fishing is normally good from about 1 May until late October. Rainbow, steelhead, Dolly Varden trout; sockeye, humpback, dog and silver salmon migrate into the local streams by the thousands. If you are a fisherman, this is the place. If you have your gear, bring it; if not, it may be purchased at the Navy Exchange or in town. The Special Services Division also has a large quantity of fishing gear which may be used on a no-cost, loan basis.

Fish and game laws are currently being revised. However, the laws administered by the Department of Interior Fish and Wildlife Service will remain in effect until the new state regulations relating to game and fur animals, birds and game fishes are enacted and put into effect. Under present regulations, a game fishing license costs $1.00 for residents and $2.50 for non-residents.

Scenic Beauty — Photographers (both still and movie) will have a field day here. The scenery is spectacular, especially in the summer when everything is green. Mountains (at your back door), lakes, seashore and streams offer an unending variety of color and composition for photographers. Wild flowers are in abundance for about five months each year. Cameras and film are available locally.

Clubs—The station has an Officers' Club, CPO Club, EM Club and a Marine Club, all within walking distance of most barracks and housing units. All are modern clubs offering movies, bingo, food, drinks and occasional entertainment by local talent and USO shows. All are heavily patronized and thoroughly enjoyed. The Kodiak Conservation Club is a sportsman's club dedicated to conservation measures, especially the planting of fish in lakes and streams.

Medical Care: The station has a well-equipped hospital which furnishes medical care to military personnel and their dependents. Illnesses or injuries which require care beyond the capabilities of the hospital are transferred to the 5040th U. S. Air Force Hospital, Anchorage, Alaska, or to one of the naval hospitals down in the other section of CONUS.

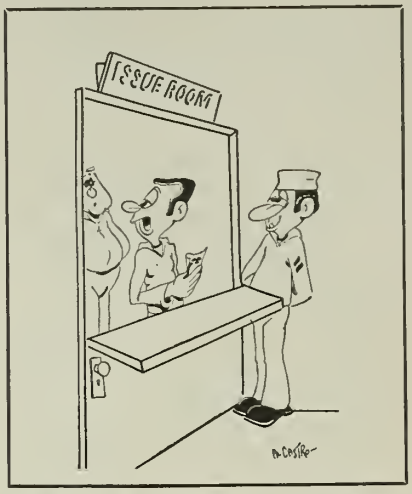
Immunization Inoculations Required: Personnel ordered to Kodiak should have completed smallpox, typhoid-paratyphoid and tetanus-diphtheria immunizations before departure. Personnel under age 40 should have completed the basic series of poliomyelitis immunization. However, travel need not be delayed for any except the first dose. Required doses will be given after arrival at Kodiak.

All dependents under 16 years of age proceeding to any overseas area are required to have Schick negative status or be immunized against diphtheria before they travel.

Dental Care: Dental care is available to all military personnel and their dependents as set forth in the Dependents' Medical Care Act of 1956.

All in all, you can expect to have an interesting and rewarding tour of duty in Kodiak.

All-Navy Cartoon Contest
A. B. Castro, SA, USN



"He wants ten pounds of relative bearing grease for the gunnery department."

Navy Relief Society Shows Big Increase in Aid Program

In 1958 the Navy Relief Society granted more than 70,000 interest-free loans to Navymen and their families, according to the Society's annual report on its operations.

The expenditure for these loans came close to four-and-one-half-million dollars — nearly three times the amount loaned by the Society in 1948 — which shows how the Society's activities have expanded over the last ten years. The Society also paid out about $750,000 in outright grants in almost 15,000 cases last year — about four times the total of such grants in 1948. In what the Society calls "relief in kind" (layettes, nursery expenses, thrift shops and such) the expansion has been even greater. In 1948, expenditures in this area came to $20,000. In 1958 they totaled some $147,000, which is more than a sevenfold increase.

Besides helping financially, the Society rendered assistance in nearly 50,000 cases last year where monetary help was not required. These "service cases" ranged all the way from answering simple questions to easing extremely complicated situations of personal and family distress.

Three More Titles Added To Correspondence Courses

Three new Enlisted Correspondence Courses are now available. Four courses have been discontinued.

Enlisted correspondence courses will be administered (with certain exceptions) by your local command instead of by the Correspondence Course Center.

If you are on active duty, your division officer will advise you whether the course for which you have applied is suitable to your rate and to the training program you are following. If it is, he will see that your application (NavPers 231) is forwarded to the Correspondence Course Center, which will supply the course materials to your command for administration.

Personnel on inactive duty will have courses administered by the Center.

The new courses are:

Course	NavPers No.
*Ship's Serviceman 3 and 2	91447-1
Dental Tech. General 3 and 2	91681
*Commissarymen 3 and 2	91441-1

*May be retaken for repeat Naval Reserve Credit.

Ship's Serviceman 3 (NavPers 91446-E), *Ship's Serviceman* 2 (NavPers 91447-B), *Commissaryman* 3 (NavPers 91440-1A), and *Commissaryman* 2 (NavPers 91441-B) have been discontinued.

Here Is How Ratings Fared in Last Navy Exams for Advancement

As a result of the February service-wide examinations for advancement in rating, advancements ranged from less than 10 per cent in some ratings to run up to 100 per cent in others.

Again this month, about the same opportunities exist.

This can mean several things to those qualified to take the exam. If your rating is in the 100 per cent class, pass the examination and you will probably receive your advancement. If your rating is in the less than 100 per cent category, you must earn a higher score than your shipmates of the same rate before you get the nod. And, if your rating is in the less than 10 per cent group, it might be well to consider changing your rating.

In any event, it is suggested that you take a good look at BuPers Insts. 1440.18B and 1440.5B for the requirements. It certainly can't hurt, and there is a chance you might advance faster.

Here's a breakdown of the number of personnel authorized to be advanced as a result of the February 1959 Exams. ("All" indicates that all who passed the exam were authorized to be advanced. A dash indicates that the rating does not exist at that pay grade level.) Emergency service ratings and selective emergency service ratings not listed below are included with, and computed with, the corresponding general service rating.

For advance planning purposes, here are the estimates of advancement opportunities for those who are taking the examinations this month. These estimates are based on the percentage who normally pass the examination and on the number of expected openings. Advancements to pay grades E-8 and E-9 have not been estimated.

PO2s are reminded that they now need 24 months in grade, instead of only 12 months, before they can be advanced to PO1.

The following ratings are those in which the greatest Navy-wide shortages exist, and which therefore present the best opportunities for advancement. Of those who pass the examinations for these ratings it is

NUMBER WHO PASSED AND NUMBER TO BE ADVANCED AS A RESULT OF FEBRUARY SERVICE-WIDE EXAMS

	E-4		E-5		E-6		E-7	
	Passed	Advanced	Passed	Advanced	Passed	Advanced	Passed	Advanced
GROUP I (Deck)								
BM	1740	600	1379	30	1397	42	1102	431
QM	340	All	145	All	95	26	240	29
RD	1021	All	508	All	67	All	135	All
SM	463	All	161	All	51	All	127	All
SO	449	All	250	All	46	All	79	All
SOO	28	All	—	—	—	—	—	—
GROUP II (Ordnance)								
FT	—	—	348	All	174	10	267	10
FTA	597	319	—	—	—	—	—	—
FTE	4	All	—	—	—	—	—	—
FTG	6	All	—	—	—	—	—	—
FTL	125	All	—	—	—	—	—	—
FTM	396	186	—	—	—	—	—	—
FTU	30	All	—	—	—	—	—	—
GM	1215	600	690	60	639	21	709	203
GS	58	All	39	All	47	20	26	12
MN	59	All	64	10	49	2	48	14
NW	56	All	26	All	15	All	35	All
TM	288	All	145	All	199	110	256	168
GROUP III (Electronics)								
ET	—	—	540	All	160	All	435	102
ETN	601	All	—	—	—	—	—	—
ETR	575	All	—	—	—	—	—	—
ETS	51	All	—	—	—	—	—	—
GROUP IV (Precision Equip.)								
IM	42	35	26	17	14	2	20	3
OM	17	All	11	All	7	All	14	3
GROUP V (Admin. & Clerical)								
CT	627	All	395	All	60	All	126	25
CS	1145	500	1091	30	1215	30	736	162
DK	283	224	127	All	100	10	107	31
JO	85	All	28	All	5	All	13	All
MA	152	All	75	All	49	All	46	All
PN	1136	700	338	280	198	60	260	49
RM	1456	All	624	All	157	All	313	All
SH	981	250	483	15	343	10	151	7
SK	962	All	507	450	374	60	416	131
TEIRM)	—	—	45	All	30	All	70	All
TEIYNI	—	—	—	—	16	2	14	2
YN	1455	All	946	600	577	50	879	113
GROUP VI (Miscellaneous)								
DM	150	70	59	All	7	All	13	All
LI	108	38	27	4	37	2	30	3
MU	108	All	92	All	19	All	22	All
GROUP VII (Eng. & Hull)								
BR	—	—	—	—	3	All	11	All
BT	1293	All	754	All	167	100	315	191
DC	325	200	236	130	281	10	226	50
EM	1562	All	997	All	250	All	409	314
EN	1371	All	1005	650	756	200	677	347
IC	652	All	256	All	44	All	53	All
ML	31	25	19	All	9	2	12	2
MM	1943	All	1062	All	225	All	524	256
MR	384	All	162	All	27	All	49	All
PM	18	All	9	All	2	All	4	2
SF	—	—	—	—	332	40	377	62
SFM	326	All	297	150	—	—	—	—
SFP	465	All	231	200	—	—	—	—

(Continued)

NUMBER WHO PASSED AND NUMBER TO BE ADVANCED AS A RESULT OF FEBRUARY SERVICE-WIDE EXAMS

	E-4		E-5		E-6		E-7	
	Passed	Advanced	Passed	Advanced	Passed	Advanced	Passed	Advanced
GROUP VIII (Canstructian)								
BU	—	—	—	—	30	All	35	10
BUH	12	All	10	All	—	—	—	—
BUL	174	130	62	All	—	—	—	—
BUR	58	All	25	All	—	—	—	—
CE	—	—	—	—	15	All	20	All
CEP	31	All	16	All	—	—	—	—
CES	14	All	3	All	—	—	—	—
CET	13	All	11	All	—	—	—	—
CEW	49	All	23	All	—	—	—	—
CM	—	—	—	—	57	4	64	8
CMA	109	68	46	25	—	—	—	—
CMH	52	46	30	15	—	—	—	—
EO	—	—	—	—	131	12	67	4
EOH	157	50	69	8	—	—	—	—
EON	136	30	82	7	—	—	—	—
SV	37	28	13	All	3	All	1	All
SW	—	—	—	—	22	2	21	3
SWE	27	All	24	13	—	—	—	—
SWF	21	All	23	12	—	—	—	—
UT	—	—	—	—	17	All	19	All
UTA	17	All	7	All	—	—	—	—
UT8	10	All	8	All	—	—	—	—
UTP	68	All	24	All	—	—	—	—
UTW	8	All	6	All	—	—	—	—
GROUP IX (Aviation)								
A8	—	—	203	90	201	55	133	55
ABG	284	63	—	—	—	—	—	—
A8U	557	217	—	—	—	—	—	—
AC	362	200	295	120	66	15	84	32
AD	—	—	1574	465	1059	50	1337	116
ADJ	942	539	—	—	—	—	—	—
ADR	961	All	—	—	—	—	—	—
AE	—	—	618	550	99	All	159	All
AEI	246	200	—	—	—	—	—	—
AEM	662	300	—	—	—	—	—	—
AG	221	All	128	All	14	All	35	All
AK	857	320	212	100	116	15	126	34
AM	—	—	—	—	174	All	421	220
AME	141	60	63	All	—	—	—	—
AMH	642	423	346	All	—	—	—	—
AMS	920	517	530	All	—	—	—	—
AO	601	450	359	180	285	23	284	23
AQ	—	—	153	All	58	6	79	4
AQ8	52	All	—	—	—	—	—	—
AQF	144	All	—	—	—	—	—	—
AT	—	—	1134	All	168	All	209	All
ATN	675	All	—	—	—	—	—	—
ATR	472	All	—	—	—	—	—	—
ATS	125	All	—	—	—	—	—	—
GF	86	All	86	All	18	4	36	4
PH	—	—	145	120	78	4	116	22
PHA	127	55	—	—	—	—	—	—
PHG	289	160	—	—	—	—	—	—
PR	133	All	89	All	58	8	60	7
PT	11	All	0	0	1	All	10	All
TD	—	—	98	50	57	10	57	9
TDI	87	All	—	—	—	—	—	—
TDR	37	All	—	—	—	—	—	—
GROUP X (Medical)								
HM	2082	1100	1196	275	1070	32	1190	137
GROUP XI (Dental)								
DT	479	260	151	90	95	4	144	7
GROUP XII (Steward)								
SD	1553	46	903	30	579	17	483	151

estimated that 70-100 per cent may expect advancement:

Pay Grade E-4:
QM, RD, SM, SO, GS, NW, TM, ET, OM, CT, JO, MA, RM, SK, YN, MU, IC, AG, AQ, AT, GF, PR, PT, and TD

Pay Grade E-5:
QM, RD, SM, SO, FT, NW, TM, ET, OM, CT, JO, MA, RM, TE(RM), DM, MU, 8T, EM, IC, MM, MR, PM, CE, SV, UT, AG, AQ, AT, GF, PR, and PT

Pay Grade E-6:
RD, SM, SO, NW, ET, CT, JO, RM, TE(RM), DM, MU, BR, DC, EM, IC, ML, MM, MR, PM, BU, CE, SV, SW, UT, AE, AG, AT, and PT

Opportunities are good for the following ratings. It is estimated that 35-70 per cent of those who pass the examination will be advanced:

Pay Grade E-4:
BM, FT, GM, MN, IM, CS, DK, PN, DM, BT, DC, EM, EN, ML, MM, MR, PM, SF, 8U, CE, CM, SV, SW, UT, AC, AD, AE, AK, AM, AO, PH, HM, and DT

Pay Grade E-5:
GS, IM, DK, PN, SK, YN, DC, EN, ML, SF, 8U, CM, SW, A8, AC, AD, AE, AK, AM, AO, PH, TD, and DT

Pay Grade E-6:
GS, OM, MA, and AM

Fair advancement opportunities exist in the following ratings. An estimated 10-35 per cent of those who pass should be advanced:

Pay Grade E-4:
SH, LI, EO, and AB

Pay Grade E-5:
MN and HM

Pay Grade E-6:
PN, SK, 8T, EN, SF, A8, AC, AK, AQ, GF, PR, and TD

The Navy has adequate numbers of personnel in the following ratings. While none of these ratings will be closed, it is estimated that less than 10 per cent of successful examinees will be advanced:

Pay Grade E-4:
SD

Pay Grade E-5:
8M, GM, CS, SH, LI, EO, and SD

Pay Grade E-6:
8M, QM, FT, GM, MN, TM, IM, CS, DK, SH, TE(YN), YN, LI, CM, EO, AD, AO, PH, HM, DT, and SD

That's the story of your chances for advancement. Good Luck!

Buckeye, Jet Trainer

The Navy Air Basic Training Command's new T2J jet trainer has been named *Buckeye* in honor of the state in which it is built. ENS Gordon O. Prickett, a flight student at Pensacola, submitted the name in a name-the-plane contest conducted within the Training Command.

Latest List of Motion Pictures Scheduled for Distribution To Ships and Bases Overseas

The latest list of 16-mm. feature movies available from the Navy Motion Picture Service, Bldg. 311, Naval Base, Brooklyn 1, N.Y., is published here for the convenience of ships and overseas bases.

Those in color are designated by (C) and those in wide-screen processes by (WS). Distribution began in June 1959.

Up Periscope (1315) (C) (WS): Drama; James Garner, Edmond O'Brien.

The Amazing Colossal Man (1316): Drama; Glenn Langan, Cathy Downs.

The Giant Behemoth (1317): Science-Fiction; Gene Evans, Andre Morell.

The Young Land (1318) (C): Drama; Pat Wayne, Yvonne Craig.

These Thousand Hills (1319) (C) (WS): Western; Don Murray, Richard Egan.

The Remarkable Mr. Pennypacker (1320) (C) (WS):: Comedy; Clifton Webb, Charles Coburn.

The Great St. Louis Bank Robbery (1321): Drama; Steve McQueen, Graham Dorton.

Machine Gun Kelly (1322): Drama; Charles Bronson, Susan Cabot.

Compulsion (1323) (WS): Drama; Orson Welles, Diane Varsi.

Doctor's Dilemma (1324): Comedy; Leslie Caron, Dirk Bogarde.

Forbidden Island (1325) (C): Drama; Jon Hall, Nan Adams.

Some Like It Hot (1326): Comedy; Marilyn Monroe, Tony Curtis.

Ride Lonesome (1327) (C) (WS): Western; Randolph Scott, Karen Steele.

I, Mobster (1328) (WS): Drama; Steve Cochran, Lita Milan.

Jukebox Rhythm (1329): Musical; Jo Morrow, Jack Jones.

Pork Chop Hill (1330): Drama; Gregory Peck, Harry Guardino.

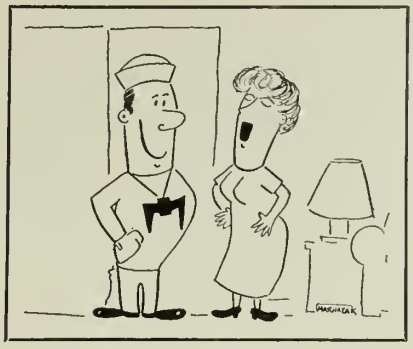
The Sound and The Fury (1331) (C) (WS): Drama; Yul Brynner, Joanne Woodward.

Rio Bravo (1332) (C): Western; John Wayne, Dean Martin.

Island of Lost Women (1333): Melodrama; Venetia Stevenson, Jeff Richards.

The Geisha Boy (1334) (C): Comedy; Jerry Lewis.

D. J. Majchrzak, DN, USN



"We will soon see the swagger of little feet."

Brooklyn RecSta Has Overseas Check-Out

The U.S. Naval Receiving Station, Brooklyn, is helping to prepare overseas-bound naval personnel for their new experience in a foreign land.

RecSta has established a special indoctrination for individuals bound for 24 countries from Iceland to Brazil and in Europe and Africa.

During this special indoctrination, which reaches an average of over 300 men and women each month, Navy personnel headed for foreign duty are introduced to local customs and traditions of the country to which they have been assigned, sensitive subjects to be avoided, and disciplinary problems typical to the area. A few useful words and phrases are demonstrated.

In addition, all hands are given a specially prepared folder—24 are available, depending on your destination—which contains a pocket guide, a Welcome Aboard pamphlet from the overseas command, comments from persons who have served in the area, and a language phrase book. The President's People-to-People message is read to each person and he is shown a copy of the article "Overseasmanship," which appeared in the May 1958 edition of ALL HANDS magazine.

Whenever possible, men who have recently returned from overseas are asked to add their personal comments.

RecSta's commanding officer, CAPT Scarritt Adams, USN, started the program in 1958 when he wrote letters to many overseas commands. He asked them for Information or Welcome Aboard pamphlets, and any other information that would aid personnel coming into their area. In December 1958 another check-in and check-out point was established at RecSta Brooklyn. There, Navy men and women going overseas were briefed on the area into which they were going. That same briefing, although improved, is still being given at RecSta today.

ANSWERS TO QUIZ AWEIGH

1. (a) USS *Independence* (CVA 62).
2. (b) The men who clean the compartment at the foot of the ladder.
3. (d) None of these. (Miniature medals are worn with evening dress only and CPOs do not wear white tie with tails as part of their prescribed uniform.)
4. (c) Male officers and CPOs only.
5. (a) EO—Equipment Operator.
6. (c) Group VIII, which takes in the construction ratings.

Quiz Aweigh is on page 43.

Three Titles Added to List Of Correspondence Courses

Three new enlisted correspondence courses are now available from the Navy Correspondence Course Center. They are:

Course	NavPers
Chief Hospital Corpsman	91671
*Machinist's Mate 2	91502-1
Aviation Electrician's Mate 3 and 2	91610-1

* May be retaken for repeat Naval Reserve credit.

The following courses have been discontinued: *Handbook for Hospital Corpsman 1 and C* (NavPers 91670-A), *Machinist's Mate 2* (NavPers 91502-B), and *Aviation Electrician's Mate, Volume 1* (NavPers 91610-C).

Enlisted Correspondence Courses will be administered (with certain exceptions) by your local command instead of by the Correspondence Course Center.

If you are on active duty, your division officer will advise you whether the course for which you have applied is suitable to your rate and to the training program you are following. If it is, he will see that your application (NavPers 231) is forwarded to the Correspondence Course Center, which will supply the course materials to your command.

Those on inactive duty will have courses administered by the Center.

Rules and Regs on Running Your Ship or Station Newspaper

SHIP AND STATION newspapers are a vital part of today's Navy.

Navymen throughout the Fleet read them because they enjoy them, but—whether you realize it or not—your ship or station newspaper is published "as a positive factor in promoting the efficiency, welfare and contentment" of the crew, (Article C-9701, *BuPers Manual*).

Authority for publishing a ship or station newspaper is given in "Department of the Navy Publications and Printing Regulations (NavExos P-35, Revised July 1958).

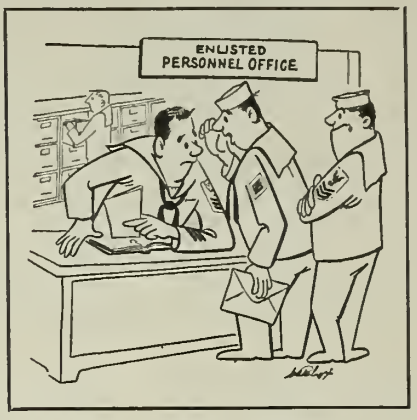
This publication provides regulations and guidelines which implement and supplement the provisions of Government Printing and Binding Regulations, published by the Congressional Committee on Printing. Also governing service newspapers are Bureau of Budget circular letters, decisions of the Comptroller General, policies established by the Navy Publications and Printing Control Committee, and various laws pertaining to publications and printing.

All editors of ship or station newspapers, as well as prospective editors and staffers alike, should have a copy of NavExos P-35 (Revised July 1958) and be familiar with its contents. Part Two of Section VI of this publication is devoted entirely to ship and station newspapers. (Copies of "P-35" may be procured from Bureau of Supplies and Accounts stocking points.)

"P-35" grants blanket approval for publishing a ship or station newspaper, subject to the considerations listed below. No other approval by the Secretary of the Navy is required. Authorization for the publications of a ship or station newspaper is automatically granted by NavExos P-35 provided that:

• They are sanctioned by the commanding officer, officer-in-charge, or head of the activity concerned; and they are published and distributed in accordance with NavExos P-35 and with the policies and regulations concerning service morale, efficient use of manpower, conservation of funds and supplies, maintenance of security, and promotion of the mission of the Department of the Navy.

In publishing a ship or station newspaper, the commanding officer, officer-in-charge, or head of the activity concerned is responsible for compliance with all regulations applicable to newspapers published for or within his command. It is also the skipper's responsibility to assure himself that:



"Before you go to a lot of unnecessary work . . . I'd prefer shore duty"

• All material appearing in the ship or station newspaper conforms to generally accepted standards of good taste, and that insofar as military personnel are concerned, the contents of such newspapers are in accordance with the policies established by the Chief of Naval Personnel. These policies are spelled out in Section 7, Chapter 9, *BuPers Manual*.

NavExos P-35 provides the only regulations under which ship or station newspapers may be published without individual approval of the Secretary of the Navy.

These regulations state that:

• No more than one newspaper may be published by any ship or station except upon specific prior authorization by the Administrative Office, Navy Department.

• Each newspaper shall include in its masthead the names (and rank/rates) of staff members and such other material as may be desired, as well as the following information:

The name of the commanding officer, officer-in-charge, or the head of the activity.

A statement certifying compliance with NavExos P-35 (Revised July 1958).

Where printed (on government equipment or commercially).

Frequency of issue (daily, weekly, irregularly, etc.).

Source of funds (appropriated or nonappropriated). If nonappropriated, it shall be stated that the newspaper is published at no cost to the government.

• Each issue of a ship or station newspaper may be printed in only one color of ink. Where a special functional purpose is served, a commanding officer may authorize up to a maximum of three special editions in any 12-month period in lieu of three regular editions. On these special occasions (anniversary of a station, ship launching, holiday, etc.) ship or station newspapers may be printed in not more than two colors of ink. These editions shall be subject to the concurrence of the cognizant publications and printing office or the Fleet, force, or type commander.

• Ship or station newspapers may be printed commercially.

• The number of copies of each ship or station newspaper printed shall be limited to the minimum quantity needed for the personnel of the ship or station and for exchange purposes.

• Ship or station newspapers *must not* be mailed under the penalty indica except for exchanges and other official purposes. Ask local postal authorities for the appropriate regulations governing the mailing of newspapers. In this respect, commanding officers, editors, and staff members of ship and station newspapers are advised to exercise caution in publishing any material relative to a drawing or raffle. Mailing ship or station newspapers that contain stories or other printed matter about drawings or raffles is in violation of the Title 18 United States Code, Section 1302, which states in part:

"Whoever knowingly deposits in the mail, or sends or delivers by mail . . . any newspaper, circular, pamphlet or publication of any kind containing any advertisement of any lottery, gift enterprise, or scheme of any kind offering prizes dependent in whole or in part upon lot or chance, or containing any list of the prizes drawn or awarded by means

of any such lottery, gift enterprise, or scheme, whether said list contains any part or all of such prizes . . . shall be fined not more than $1000 or imprisoned not more than two years, or both. . . ."

• No station newspaper may be published in competition with commercial newspapers available to personnel of the station.

• No ship or station newspaper may contain, either in its news or editorial columns, material of the following categories:

Political propaganda or information implying endorsement of any political party, platform, or candidate. Ship or station newspapers published in overseas commands or other areas where civilian-published English-language newspapers are not generally available may include factual political campaign news procured from reliable news sources. Other ship or station newspapers should contain no political campaign news, since such news is generally available in local civilian newspapers.

• No ship or station newspaper may contain any *advertisement* inserted by or for any private individual, firm or corporation.

No material may be included which implies in any manner that the government endorses or favors any specific commercial product, commodity, or service.

• Ship or station newspapers may contain lost-and-found notices; listings or requests for housing facilities; announcements of educational courses; notices of non-profit organizations sponsored by the naval activity; and offers of, and requests for, rides to and from work.

• Ship or station newspapers will not be distributed as supplementary inserts in civilian enterprise newspapers or periodicals. Conversely, civilian enterprise newspapers or periodicals will not be distributed as supplementary inserts in ship or station newspapers. However, one (but not more than one) civilian enterprise comic supplement, with or without commercial advertising, may be distributed as an insert in a ship or station newspaper, provided that fair and equal opportunity is provided for responsible persons or organizations to compete for this privilege. If the supplement contains commercial advertising, each page must contain a clear statement, in similar type, to the effect that the appearance of commercial advertisement in the supplement does not constitute an endorsement by any military department of the products or services advertised; and its front page must contain the following statement: "Published by (name of publisher), a private firm (or individual). Opinions expressed by the publishers and writers herein are their own and are not to be considered an official expression by any military department. The appearance of advertisements in this publication does not constitute an endorsement by any military department of the products or services advertised." (This last sentence can be omitted if the paper does not contain advertising.)

• When publication of a ship or station newspaper is discontinued or temporarily suspended, notification of such action must be forwarded without delay to the Administrative Office, Navy Department (Publications Division), Washington 25, D.C., and to the bureau or office having management control.

• *Mandatory Distribution.* The initial distribution of each issue of ship or station newspapers shall include:

Two copies to the Administrative Office, Navy Department (Publications Division), Washington 25, D.C.

Two copies to the Chief of Naval Personnel (Pers G15).

Two copies to the chief of the bureau or office having management control.

One copy to the Chief of Information.

If AFPS material is used, two copies to the Armed Forces Press, Radio and Television Service, 250 West 57th St., New York 19, N.Y.

If your ship or station newspaper is published for civilian personnel, or for both military and civilian personnel, two copies will be furnished to the Chief of Industrial Relations.

These excerpts from NavExos P-35 (Revised July 1958) are the basic regulations governing the publication of a ship or station newspaper. Other guidelines may be found in Articles C9701-C9705, *BuPers Manual;* SecNav Inst. 5600.1, 5600.5, and 5870.1; and Navy Civilian Personnel Inst. 20.5-5 and 60.3-5.

In addition, Chapter 8 of the *Navy Public Information Manual's* Appendix A has a few choice words on the "what's what" level for officer-advisers, editors, and reporters. According to the *PubInfo Manual* (NavExos P-1035, which was issued as an enclosure to SecNav Inst. 5720.7), the principle behind publication of ship or station papers is the fact that an informed man is a better, more contented, and more effective person. To live up to that principle, a newspaper should appeal to its readers by containing shipboard and other news and information of value to personnel, in addition to such items of entertainment as jokes, cartoons and features.

Ship and Station Papers Get Top Rating

The Department of Defense has issued certificates of merit to three Navy ship and station newspapers for being Outstanding among their class for the last quarter of 1958 (October-December).

The ***Bluejacket,*** published by NAS Memphis, Tenn., was honored "as an outstanding service paper in the letterpress stateside class;" the ***Almanac,*** pride and joy of the attack carrier USS *Bon Homme Richard* (CVA 31) was selected as the best photo-offset paper in the overseas class; while the ***MCB Six Log,*** put out by and for the men of Mobile Construction Battalion Six, was commended for being the outstanding mimeographed paper in the overseas class.

This recognition of achievement is awarded each quarter to outstanding service publications which are selected for their general attractiveness, conformity with journalistic principles, and readability for the period. The Certificate of Merit may be awarded to the same publication only once in a 12-month period.

These awards are made by the Office of Armed Forces Information and Education, Department of Defense.

This manual also states that a ship or station newspaper should never be used as a means for the skipper (or anyone else) to lecture the men, since this would defeat the paper's primary purpose.

Navy editors, as well as their counterparts in other services, have found that the Armed Forces Press Service can be a big help in turning out a creditable newspaper. AFPS issues a weekly clipsheet which contains news, pictures, cartoons and other art which can be used to supplement local resources, regardless of whether your paper is printed by letterpress, mimeograph or photo-offset method.

AFPS also publishes an *Armed Forces Newpaper Editors' Guide* (NavPers 10293A) which may be ordered from regular forms and publications supply distribution points. Now in the process of being revised, this publication superseded the *Navy Editors' Manual* which was originally prepared by the ALL HANDS Staff and is now out of print. The Guide is a handy compilation of the technical information needed to produce a readable paper without too much strain.

Navy editors may request to be placed on AFPS mailing list by writing to the Officer-in-Charge, Armed Forces Press, Radio and Television Service, 250 West 57th St., New York 19, N.Y., via the appropriate chain of command and the Administrative Officer, Navy Department.

Twenty-six Join Ranks Of Warrant Officers

Eleven first class and 15 chief petty officers have been issued temporary appointments to Warrant Officer, W-1. These are from an eligibility list established by a selection board convened 4 Feb 1958.

Regular Navy appointments were broken down into the following designators: Boatswain (7132), eleven; Aviation Ordnance Technician (7212), one; Surface Ordnance Technician (7232), one; Ordnance Control Technician (7242), three; Aviation Maintenance Technician (7412), one; Machinist (7432), one; Electrician (7542), two; Communications Technician (7642), one; Electronics Technician (7662), one; Ship Repair Technician (7742), one; Dental Service (8182), one; Photographer (8312), two.

Now It's Official— Warrant Officer Program Will Be Phased Out

The Warrant Officer Program, which is as old as the Navy itself, is going the way of many of today's airplanes and missiles. It's being phased out; but in a way that will benefit the WO.

The current warrant officers eligibility list contains the names of the last who may be appointed. Those who took the officer selection test in June this year may be considered for LDO (temporary). If they are eligible, and do want to be considered, application must be made in accordance with a forthcoming BuPers Inst. 1120.18F. (The names of those who are ineligible or who fail to apply will be dropped.)

By 1975, most warrant officers should have either retired from the Navy, or been selected for limited duty officer (temporary). However, because of their age, only a small percentage of the present warrants are eligible for LDO(T). (Applicants must not have reached 34th birthday as of 1 July of year they apply.)

Warrant officers lose nothing under the new phase-out plan. No warrant officer will be forced out of his job, no career benefits will be taken away.

Warrants will, in fact, gain under the new program. Just as under the old system, eligible warrant officers may still apply for the LDO(T) program. (But only if they want to; they may stay and retire as WOs if they choose.) Those W-2s, W-3s and W-4s who are eligible, or who are not selected under the LDO(T) program, will be given permanent appointment as CWO.

All warrants will benefit by a new stepped-up temporary promotion system. Under the old plan, a WO had to serve three years between W-1 and W-2, six years between W-2 and W-3, and six years between W-3 and W-4. Under the new plan, a temporary promotion will be given after two years as W-1; and four years as W-2 or W-3. The present three, six, and six years (as prescribed by law), will still be used for permanent promotion.

The end of the Warrant Officer Program was almost inevitable. With the advent of the limited duty officer (LDO), the officer specialist distinction long associated with a warrant officer was being duplicated in the LDO ensign—and with more rank. Then, some years later, when the Navy selected men for promotion to master chief petty officers, some more of the warrant's specialist duties were infringed upon by these "super" chiefs.

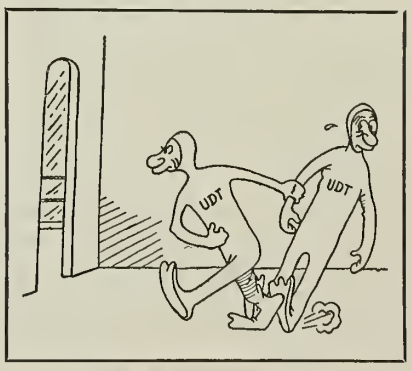
Warrant officers were being squeezed from the top by the LDO program, and from the bottom by the E-8, E-9 program. To try to remedy this, the Chief of Naval Personnel appointed a special committee of naval officers to study the WO program, together with the LDO, and other related officer programs.

Here are the committee recommendations that will be put into effect:

- Phase out the Warrant Officer Program by normal attrition and by curtailing input after fiscal year 1960. (The present WO eligibility list.)
- Authorize permanent appointments and accelerated temporary promotions for present warrant officers.
- Change certain warrant officer billets (about one-third of the present WO billets) to master chief petty officer billets, and change the remaining WO billets to unrestricted line or staff corps billets. (Many of these billets will be classified to indicate the need for a technical skill, and be filled by LDOs or warrant officers.)
- Expand the Limited Duty Officer (Temporary) Program by increasing the number of categories and by increasing input from the

All-Navy Cartoon Contest

D. B. MacDougall, SMC, USN



"B-B-But it's raining."

present 550 to about 800 per year, and by channeling most enlisted-to-officer procurement through this program.

- Limit input into the Integration (fo'c'sle to quarterdeck) Program to only those who are considered fully qualified to compete with their contemporaries on career officer standards. (This is expected to cut the number of men selected each year under the Integration Program from about 200 to about 50.)
- Activate a temporary officer program for the Medical Service Corps as a replacement for the Medical Service and Dental Service warrant categories.
- Require a minimum of nine years' prior active service on appointment to LDO(T) status. (Again, the lead time involved makes the minimum service requirement eight years, computed to 1 July of the year in which application is made.)
- Make selection to permanent LDO status concurrent with and contingent upon selection to the grade of lieutenant commander. Selection to LCDR will be made within existing legislative limitations. It appears at this time that there should be about 130 of these selections a year.
- Develop and implement a plan to continue the training for LDOs to insure that they are kept in step with technological developments.
- Modify the master chief petty officer input to match billet requirements. At the present time E-9s are being selected proportionately with the number of men in the rating. Under the new plan, the rating of the 2800 MCPOs will fill, as a first requirement, the technical needs of the Navy in each rate.
- Coordinate LDO(T), WO and MCPO detailing within the Bureau of Naval Personnel during the transition period.
- Establish a three-year obligated service requirement as a condition for advancement to master chief petty officer for personnel with 17 years' service or more. (This is the same obligated service now required of men selected for warrant officer.)

The Warrant Officer Program should be phased out by 1975. There may still be a few warrants aboard after 1975, however. The law permits LDOs who twice fail to be selected for promotion to revert to permanent warrant officer. (The new committee plan needs no change in legislation.) Limited duty officers in this category will comprise the only input into the WO program after 1960.

About 550 men per year are currently being selected for LDO(T). This will be raised to about 800 per year starting in 1961. (The first 800 will be picked from the men who were tested in June.) Ultimately, there should be about 9900 LDO(T) /LDOs in the Navy. As of 30 June, there were 2480 LDOs in the Navy, and 4945 WOs.

The new officer program should ease several other so-called problem areas in the Navy. Here are a few:

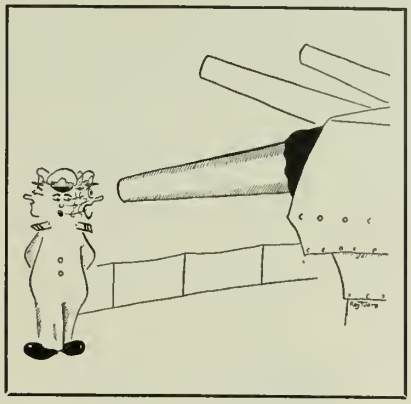
LDO (T) officers will progress from ensign upward, ranking above new officers coming into the Navy after them. The younger officers will naturally go to a senior and older officer for advice. Many times in the past, these young junior officers have hesitated to go to the more experienced, but junior, warrant officer for advice.

With master chief petty officers going to many present WO billets, and no increase in the number of MCPOs, chiefs will be spread thinner throughout the Navy, and in positions of higher responsibility.

By letting only the very best men go into the unrestricted line (through Integration), those selected will be better able to compete for promotion with officers who are Naval Academy graduates, or graduates of NROTC. Many officers procured through Integration in past years have found that two factors—comparative age and formal education—have worked against them.

It all boils down to this. The Warrant Program was obsolete, but the men in it are too valuable for the Navy to lose. This new plan should fill the bill by eliminating the WO Program and benefiting both the Navy and individual at the same time.

All-Navy Cartoon Contest
R. J. Tuers, JO2, USN



"Fire . . . WHOA"

HOW DID IT START

Missile Mail

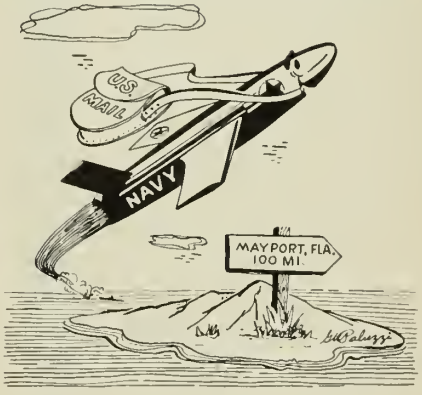
A *Regulus I*, launched from USS *Barbero* (SSG 317), successfully delivered on 8 Jun 1959 what's been hailed as the "first official missile mail."

The missile carried 3000 letters from Postmaster General Arthur E. Summerfield to various government officials — among them, President Eisenhower. It was launched about 100 miles out in the Atlantic and landed near Jacksonville, Fla., at the Naval Auxiliary Air Station, Mayport. The Jacksonville Post Office then forwarded the letters to their destinations by conventional methods.

***Barbero* had taken the letters aboard at Norfolk, Va.**

In the letters, Mr. Summerfield called the flight "an historic milestone in the use of guided missiles for communications between the peoples of the earth."

According to the Postmaster General, this was the first mail consignment to go through the postal system officially. However, there have already been a number of unofficial deliveries of mail and messages via rockets and missiles.



How to Make Arrangements for Burial in a National Cemetery

A reader writes in to ALL HANDS *with the following question:*

"Will you please tell me who is eligible, and how application can be made, for burial in Arlington National Cemetery?

"I would also like to know if the Navy will bear expenses of a private burial if a serviceman doesn't want to be buried in a national cemetery.

Here's the answer:

First of all, any member or former member of the United States armed forces whose last service ended honorably (either by death or otherwise) may be buried in a national cemetery.

Application for burial in Arlington, or in any other national cemetery, is made by contacting the superintendent of the cemetery in which burial is desired.

Grave sites cannot be reserved. At the time of death the person who is making the funeral arrangements should contact the superintendent of the national cemetery in which burial is desired and give him all available information about the dead person's military record. Shipment of the remains and final details for services should not be made until all arrangements have been completed with the cemetery.

D. J. Majchrzak DN, USN
All-Navy Cartoon Contest

"Boy, did I get chewed out!"

There is no charge for the grave site or for the opening and closing of a grave in a national cemetery. In the case of inactive and discharged members, expenses of preparation, casketing, and transportation of remains from the place of death to the national cemetery must be paid from private funds.

A sum not to exceed $250 is payable in the case of death of a veteran of wartime service or service during the Korean conflict, or a peacetime veteran receiving compensation at the time of death, or a veteran discharged or retired for disability received in the line of duty. This sum is payable to the undertaker or person whose personal funds have been used to pay expenses. To get this money, application should be made to the nearest Veterans Administration Office.

The Navy will pay expenses for the preparation, encasement and transportation of the remains for the following:

- Any member of the Regular Navy who dies on active duty.
- Any member of the Naval Reserve who dies while:

1. On active duty.
2. Performing authorized travel to or from active duty or annual training duty.
3. *On* authorized inactive-duty training or on annual training duty. (This does *not* include travel to or from inactive-duty training; however, this travel may be covered under laws administered by the VA.)
4. Being treated at the expense of the United States for injury incurred or disease contracted, while on active duty or while on inactive-duty training, or while performing authorized travel to or from active duty.

- Any member of the NROTC who dies:

1. While attending a training camp.
2. On an authorized cruise.
3. Performing authorized travel to or from such a camp or cruise.
4. While hospitalized or undergoing treatment at the expense of the United States for injury incurred, or disease contracted while attending such a camp, while on such a cruise, or while performing authorized travel to or from such a camp or cruise.

- Any accepted applicant for enlistment in the Navy.
- Any person who has been discharged from an enlistment while a patient in a United States hospital, and who continues to be such a patient until he dies.
- Any retired member who becomes a patient in a U. S. hospital while he is on active duty for a period of more than 30 days, and who continues to be such a patient until the date of his death.

Headstones, Memorial Markers for the Naval Veteran

A headstone or grave marker for the unmarked grave of a member of the Navy who dies on active duty, or for any veteran whose last active service ended honorably, is furnished, free of cost by the Department of the Army.

The Army will also furnish an appropriate memorial headstone or marker for any member of the Navy who dies in the service and whose remains have not been recovered or identified, or were buried at sea. Placement may be in either a national cemetery or in a private cemetery.

Application for a headstone or marker should be made to the Office of the Quartermaster General, Department of the Army, Washington 25, D.C., on DA Form 1815. The person submitting the application must transport the headstone from the freight station he or she designates and pay for placement in the cemetery. When burial is made in a national cemetery, a headstone is provided without request.

It may take from 60 to 90 days to process a headstone application, manufacture a marker and ship it to its final destination. Considerably more time is required if the application is not complete, or if the information shown does not conform to authorized inscription, and correspondence is necessary.

Some cemeteries restrict the type and design of a headstone or marker. This should be carefully checked before applying.

• Any military prisoner who dies while in naval custody.

• Any member temporarily absent from active duty (with or without leave) at the time of his death, unless he had been dropped from the rolls of his organization before his death.

If the next of kin makes arrangements for the preparation of the body, the Navy will pay an allowance equal to that which it would have expended had the Navy prepared the body. If this amount is difficult to determine, the next of kin is asked to submit bills to substantiate a claim. An allowance not to exceed $400 will be paid toward these expenses.

Regardless of who makes arrangements for preparation of the remains (the Navy or the next of kin), a burial allowance of up to $200 is provided by the Navy if burial is made in a private cemetery, or $75 if the body is sent directly to a national cemetery for burial. If the body is attended by a funeral director before it goes to a national cemetery, an allowance not to exceed $125 will be paid. This money is to help cover any additional expenses incurred by the family.

School for CPOs Studies Problems of Leadership

The first class of 60 top CPOs from the Naval Air Training Command started classes earlier this year at CNATRA's newly formed Chief Petty Officer Leadership School at Pensacola, Fla.

The school, which trains Chiefs in both theoretical and practical phases of positive leadership, will serve the entire Naval Air Training Command. It is administered by the Chief of Naval Air Technical Training, Memphis, Tenn., and logistic support is furnished by NAS Pensacola, Fla.

CDR Robert L. Ashcraft, USN, who graduated from Navy flight training in 1942, is the Officer-in-Charge.

S. P. Gray, BUCS, USN, is the school's leading chief and senior instructor. Gray's world-wide duties have often found him acting as construction officer on independent duty.

School administrative work rests with R. F. Watson, ADC, USN. In 1958 he won the Pensacola Navy League Council's Leadership Award.

Test evaluation is the task of W. M. Opava, ADC, USN, holder of the Commandant's Award for performance of duty at the Barksdale Air Force NCO Academy.

Other instructors assigned to the Navy school are R. G. Growe, PHC, USN; R. J. Frazier, AEC, USN; R. A. Breed, AEC, USN; and John S. Rogers, RMC(SS), USN.

Student instruction includes military law, moral leadership, supervision and management, communicative skills and public speaking, world affairs, and physical training. Formal instruction by the staff is supplemented by military and civilian guest speakers.

San Diego Navymen Are Good Scouts

San Diego, Calif., has the reputation of being a strong Navy community. It also is known for its strong backing of Scouting. There's a connection here.

Almost every Scout District in San Diego County is represented, in some way, by adult leaders stationed at the Recruit Training, Service School or Administrative Commands of the huge Naval Training Center. Such positions as District Commissioner, Scout Master, Institutional Representative, Explorer Adviser and many others are typical of the many ways in which the Navyman takes part in the Scouting program in Southern California.

This year, over 1500 Scouts of all ages have already visited NTC to take part in citizens' conferences, overnight encampments, track and field meets, sea regattas and guided tours. They come from as far away as New Jersey and as near as NTC itself, where both Boy Scout and Explorer Scout units are sponsored and furnished a meeting hall.

The major portion of the population at NTC is made up of recruits and Service School students. Although they are at the Center for only a short period, Scouting is well represented in their ranks. More than 2500 former Scouts are usually undergoing Navy training. Of these, nearly 100 are Eagle Scouts.

Just to prove hearts are in the Scouting program, NTC personnel also say it with financial contributions. They recently donated $10,000 to help build better Scouting facilities in the San Diego area.

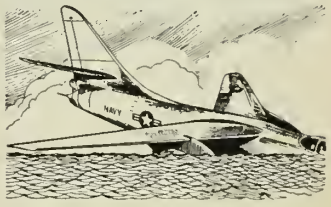
The Sherman Field Search and Rescue team (SAR) at Pensacola, Fla., is a streamlined outfit designed to cope with emergency situations. It operates with a 27-man crew which provides a 24-hour flight crew and maintenance for the two UF amphibious planes and three HO4S helicopters that constitute the SAR's aircraft.

Here is a typical situation involving the SAR team:

A call comes through the coordi-

nator's office. The alarm is sounded. Pilots and flight crew dash out to their respective aircraft. As the engines of the UF and the HO4S helicopters are warmed up, the flight surgeon and corpsman grab emergency medical supplies from the Sherman Field Dispensary and meet an ambulance which will take them to the waiting SAR aircraft. As soon as they arrive, clearance is received from the Operations Tower and they're off to their destination.

Time involved: about three minutes.



At least one helicopter and UF is kept at Sherman Field on a ready status at all times. Because a large per cent of student training takes place at NAAS Whiting Field, a helicopter is kept there also.

During one six-month period, the SAR unit averaged better than two launchings a day. The majority of these were precautionary.

Sherman Field's SAR responsibility ranges out to about one-third of the Gulf of Mexico and a 250-mile (nautical) radius of the Pensacola training command. NAS yardcraft provide a crash rescue vessel which operates up to 100 miles into the Gulf.

Men assigned to this SAR unit must be ready for almost any type aircraft accident. Teamwork and precision timing are essential to their work.

DECORATIONS & CITATIONS

"For exceptionally meritorious service to the Government of the United States in a duty of great responsibility . . ."

★ HOLLOWAY, James L., Jr., Admiral, USN, as Commander in Chief, Specified Command, Middle East, during the Lebanon crisis from 15 Jul to 26 Oct 1958. An astute leader and diplomat, Admiral Holloway successfully carried out an extremely delicate and complicated assignment during this tense international situation. Understanding the military, political and economic implications involved, he dealt with the highest-level officials and deftly utilized the forces at his command in restoring and maintaining stability in Lebanon. By his expert handling of a critical assignment, ADM Holloway added significantly to our international posture and contributed to the free world's efforts toward preserving peace.

"For exceptionally meritorious conduct in the performance of outstanding service to the Government of the United States . . ."

★ GRALLA, Arthur R., CAPT, USN, Commanding Officer, USS *Norton Sound* (AVM 1), from 1 July through 15 Sep 1958. While his ship was engaged in a particularly difficult series of missile tests of great importance to the Navy, Captain Gralla, exercising unusual technical and professional competence, sound leadership, and outstanding initiative, successfully completed all operational and technical requirements of the program in unprecedentedly short time, thereby making a major contribution to the success of these tests.

★ LANING, Richard B., CAPT, USN, as Commanding Officer of USS *Seawolf*, SS(N) 575, one of two pioneering types of nuclear-powered ships from 30 Mar 1957 to 6 Oct 1958. During this period. Captain Laning demonstrated the tremendous potential of the submarine-borne weapons systems and was instrumental in proving the peculiar capabilties of the nuclear-powered submarine to conduct effective operations in coordination with other units of the Navy's antisubmarine warfare team. An extremely competent and inspiring leader, he demonstrated to the world the ability of the nuclear-powered submarine to remain submerged and independent of the earth's atmosphere for a period of time that could encompass an enitire war patrol.

"For heroism or extraordinary achievement in aerial flight . . ."

★DE FLOREZ, Luiz, RADM, USNR (Ret.), for extraordinary achievement while participating in numberless aircraft flights throughout his naval career. Responsible for the original conception, design and flight-testing of aircraft instrumentation which included the first bubble sextant and the first complete audio flight reference, RADM De Florez made many major contributions to the development of cockpit instrumentation and controls, air speed indicators and night lighting. In the forefront of naval aviation as inventor, designer and pilot, he was recognized for his imagination and inventive skill in this field by the Scientific American Prize for Aircraft Improvement in 1934, and the Collier Trophy in 1943.

"For heroic conduct not involving actual conflict with an enemy . . ."

Navy and Marine Corps Medal

★BUTLER, Charles S., BM1, USN, for heroic conduct while serving with the U.S. Naval Ordnance Facility, Port Lyautey, Kenitra, Morocco, on 31 Jan 1958. As a member of Special Weapons Disposal Team Number One, Butler displayed exceptional courage and initiative while participating in an operation of a classified nature involving great risk of injury to himself and other team members.

★ JOHME, Ronald E., ASM3, USN, for heroic conduct in connection with the rescue of two men from drowning at La Jolla Shores Beach, Calif., on the afternoon of 20 Apr 1958. Responding to the calls for help coming from two swimmers who were suddenly pulled under water and out to sea by a strong rip tide, Johme swam a distance of approximately ninety yards in the face of extremely rough surf to reach the victims. Although pulled under the water several times by one of the struggling men, he succeeded in quieting him so that a shipmate could tow the man to safety. Proceeding to the aid of the second victim, who was floating face down in the water, Johme turned him over and brought him to shore where he administered artificial respiration until he himself lost consciousness from exhaustion.

★ MC FERRON, Jerry L., ENS, USN, for heroic conduct as co-pilot of a helicopter which crashed and burned in an open field at Imperial Beach, Calif., on 16 Aug 1958. Escaping from the wreckage of the fiercely burning aircraft, Ensign McFerron, upon realizing the plight of the remaining members of the crew, returned to the flaming helicopter in a daring attempt to rescue his companions. Sustaining severe burns, he nevertheless persisted in his rescue efforts until forcibly restrained by two fellow servicemen who had arrived on the scene.

★MOORE, George H., AN, USN, for heroic conduct while serving on board USS *Philippine Sea* (CVA-47) in waters off the coast of Southern California on the night of 5 Dec 1957. When an aircraft crashed and started burning on the flight deck of *Philippine Sea* during a night landing, Moore raced to the nearest salt-water hose station, enlisted the aid of some nearby shipmates, and effected the first play of water on the flaming aircraft. Observing the unsuccessful attempts to extricate the trapped pilot from the cockpit, he entered the hot, smouldering cockpit and freed the trapped pilot. Before leaving the aircraft, he entered the after crew's compartment which was still aflame, and made sure that no one was left. As a result of his rescue work, he sustained lacerations and first degree burns. During his heroic efforts he faced grave dangers from fire, asphyxiation and possible imminent explosion.

★REED, Robert J., MN1, USN, for heroic conduct while serving with the U.S. Naval Ordnance Facility, Port Lyautey, Kenitra, Morocco, on 31 Jan 1958. As a member of Special Weapons Disposal Team Number One, Reed displayed exceptional courage and initiative while participating in an operation of a classified nature involving great risk of injury to himself and others.

THE KEY TO VICTORY

1898 lessons learned at Manila hold true today

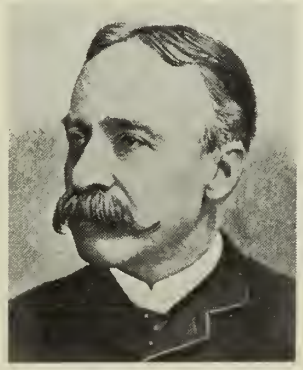
The following account was extracted from "Why We Won At Manila," by LT B. A. Fiske, USN, *published in Century Magazine, Vol. 57, November 1898—April 1899, pp. 128-135.*

WHEN WAR WAS DECLARED, it will be remembered our Fleet was at anchor in Mirs Bay, near Hong Kong; and the next day it steamed out rapidly in column, bound for Manila, or rather for the Spanish fleet, which was supposed to be there.

The succession of ships was the same as afterward in the battle, the flagship *Olympia* leading, and bearing the broad pennant of Commodore Dewey at her mainmasthead. Next came *Baltimore,* then *Raleigh, Petrel, Concord,* and *Boston.* The revenue cutter *McCulloch,* with the transports *Nanshan* and *Zafiro,* formed a separate column to starboard.

The trip to Manila was pleasant and uneventful. When abreast of Corregidor Island, and still heading to the southward, a flame shot up from the smokestack of *McCulloch,* and almost instantly a rocket was sent up from Corregidor, showing that we were discovered. This happened about eleven o'clock.

The Commodore led the Fleet continually to the south, gradually changing the course to the eastward till by half-past eleven he had gotten all the ships past the outer headlands that mark the entrance to Manila Bay.



ADMIRAL of the Navy
George Dewey

Not a gun had been fired; not a torpedo had been exploded. On the ships went, farther into the enemy's waters; and still no sound but the regular chunk, chunk of the engines, and the swish of the water under the bows.

The silence was uncanny. Suddenly we heard the report of a heavy gun to starboard and very close, and the screaming of a shell above us. All nervousness, doubt, and hesitation vanished at the sound; every man stiffened up automatically.

THE FLEET KEPT ON, Commodore Dewey leading, in person, into a harbor where he had never been—leading at night into a harbor supposed to be filled with mines and flanked with guns, and to hold the enemy's fleet. Standing by the standard compass forward, near the bows and high above the deck, he and Lieutenant Calkins, the navigator of *Olympia,* who had also never been in Manila, kept their night-long vigil. A less brave man than Dewey would not have dared to risk such an entrance; and yet it was not an act of foolish daring, or even of unwarranted hazard. He had exhausted every means of information (not many, it is true) about the defense of Manila, and had studied thoroughly all of the pros and cons.

Years of experience, study and training were being put to the test.

His train of reasoning had brought him

BRIDGE HEAD—Old photo shows Commodore Dewey on after bridge of *USS Olympia* while bombarding Spanish.

to a certain conclusion, and thence to a decision, in the calmness and quiet of his cabin; and this decision he proceeded to carry out when he found himself face to face with the actual emergency, the responsibility on him alone. The risk he ran was certainly great; and this does not mean the risk of his own life and safety, for that was the last thing he thought of, but the risk of losing men or ships, or even the battle itself.

During the night the Fleet steamed up the bay, pointed for Manila, in a silence that was unbroken by any warlike sound, the captain of every ship upon the bridge, and officers and men, except the watch, sleeping on deck, near the loaded guns.

A little before five the day began to break, and the vague outlines of Manila could be discerned ahead. It was off Manila that, from information received at Hong Kong, we expected to find the Spanish fleet; so all the ships went to General Quarters, and the few remaining preparations were quickly made.

AS THE LIGHT INCREASED, and glasses swept the broadening horizon, some objects to the southward that looked like men-of-war came out of the obscurity. Soon these could be made out plainly.

They were the Spanish fleet, drawn up in column of battle across the little bay that leads to the naval and military arsenal of Cavite. The Commodore ported his helm at once, and headed for the Spaniards, followed by his ships. A shore battery in Manila opened on the fleet with heavy guns; but the distance was too great for effective work, and so, after a few reply shots, the American Fleet ceased firing, in obedience to a signal from the flagship.

The American ships were steaming along swiftly and in perfect order, with the national ensign flying at the head of every mast and spanker-gaff. To the south lay the hostile fleet, disposed defiantly for battle, the beautiful flag of Spain floating over every ship, its folds curving and recurving slowly, at the will of the gentle morning air.

We soon saw that the Spaniards had disposed their force so as to cover the entrance to Cavite, the western flank of the fleet resting on Sangley Point, and the eastern flank resting on the shoal water near the land on the other side of the bay, both flanks being apparently so close to shoal water as to prevent us from passing at either place and "doubling" on them. This disposition at once suggested that of the French fleet at the battle of the Nile, and Dewey's attack in column suggested Nelson's.

THE DECISIVE MOMENT was approaching, and it was approaching in a very ticklish manner. The American Fleet was in a harbor in which not a single officer had ever been before, and with which their acquaintance had been acquired wholly from charts.

The interchange of shots between the flagships seemed to let go from every gun the shell that was waiting in it, and the action became general at once.

Shot and shell fell all about us, striking the water ahead and astern and on each side, and singing in the air like big mosquitoes, but never biting.

Our shots, on the contrary, though many went over or fell short, seemed in the main to be well directed; and many a one could be seen, like a tiny dot in the air, till it disappeared near some part of a Spanish ship, where a puff of black smoke immediately afterward testified that it had struck and exploded.

The American Fleet steamed slowly down the line to the westward, until it had passed the Spanish fleet, then countermarched and passed it, going to the eastward, then countermarched to the westward, then to the eastward, and then to the westward, and then drew out of action at half-past seven, and went to breakfast; so it passed the Spaniards five times, three times going to the westward and twice to the eastward.

The Spaniards remained virtually in the same place, *Castilla* being, in fact, moored and immovable. During our first trip the Spanish ships fired with great rapidity; but their fire slackened gradually, yet perceptibly, after that, especially on board *Castilla* and *Reina Christina*, the flagship, which, being the most "shining marks," received the greatest attention from our ships.

The major part of the battle was simply an artillery duel between the opposing fleets, one moving and the other virtually stationary; for though certain Spanish ships started out several times, with the apparent intention of attacking our rear, they were quickly driven back by our guns.

AT THE END of the last trip, *Castilla's* guns were silenced, *Reina Christina* was ablaze in two places, and the weak and irregular fire of the others betrayed the fact that their personnel and material had received such injuries that they were already *hors de combat*.

After breakfast, the Fleet started in toward Cavite again, and soon reduced the shore batteries on Sangley Point.

At the conclusion, it was found that no one in our Fleet had been killed, and only eight men had been injured, and these but slightly; they were all on board *Baltimore*, and were struck by splinters made by the same shell. Not a single ship had received any injury that reduced her efficiency in the slightest, with the exception of one gun in *Baltimore*, struck by the same shell that wounded the men.

Such was the battle of Manila Bay, sketched briefly, and in outline only. Until this battle, the most complete

naval victory in history was that gained by Nelson at the battle of the Nile, with which, as has been said, it had many points in common.

ONE FACT STANDS OUT clearly: The disproportion of hits between the two fleets was far, far greater than the disproportion between their gunnery forces. That the American Fleet was the stronger in battery power cannot be denied, and this is no reproach to us, but the reverse; for it shows that the Americans acted in accordance with the first principle of warfare, and "got the mostest men there the firstest."

Having got them there, they proceeded to use them effectively. As to the result of their target practice, seven warped iron hulls, just showing above the tops of the blue waves of Manila Bay, will continue to testify for many years to come.

Before estimating the degree of skill with which the guns were handled, the reader is respectfully invited to remember that they were not fired on shore, but at sea, and that there is about the same difference between shore gunnery and sea gunnery as there is between firing from a rest on the target range, and firing at a bird on the wing; and that shore gunnery may properly be termed a science, and sea gunnery an art. In shore gunnery the degree of precision attainable (and attained) is far beyond that which can be reached at sea, for the errors of firing are reduced to a degree that constitutes a triumph of science.

Much can be done by a good gun-captain, however, by watching for a smooth time, and firing a little before the sights bear. If anybody could have gone from ship to ship of the United States Fleet during the eventful hours between five and half-past seven on that beautiful Sunday morning, he would have seen 50 guns' crews all eagerly, yet coolly, working their guns, and he would have seen each division of guns, and each turret, under the charge of an officer responsible for it.

He would have seen, also, that besides these guns and their crews there was another very important department, that of bringing the ammunition from its safe magazines, far below the waterline, and delivering each kind to its appropriate gun.

He would have noticed, too, that although the guns were the most prominent objects in the picture, many things were being done, and many people employed, and much apparatus was being used in order that the guns should work in the most effective way; and, if he were

TEAM WORK 1898 STYLE—Ship's blackgang works below decks to keep up steam while guns roar topside.

a thoughtful person, he might ask himself a number of interesting questions, and seek the answers in the scenes before him.

THE SPECTACLE of the orderly decks, the well drilled crews working their guns, or providing ammunition, or caring for the wounded, or extinguishing a fire, might lead him to ask himself, "Is not this excellent shooting that I see merely one sign of a discipline and instruction and drill without which it could not be?"

And as he watched the guns skillfully handled by their crews and captains, there would be gradually borne in upon his mind an increasing appreciation of the long and patient drill and teaching necessary to bring their efficiency to its present point; for the skill of each division is an index of both the capacity of the men themselves, and the ability of the divisional officers. And when he had noted the uniformity of the drills throughout one ship, he would see that the efficiency of each division is an index not only of its own merits, but of the patience and firmness and intelligent effort of the executive officer, and, back of him the captain.

Continuing his inspection tour from one American ship to the next, he would see the same spirit and the same quick and obedient intelligence; and he would then understand that the performance of each ship is an index not only of its own efficiency, an evidence of the skill and faithfulness of its commander-in-chief, and, back of that, of the whole Navy itself. For every man, and every gun's crew, and every division, and every ship, and every Fleet, is simply part of one uniformly instructed, drilled, and disciplined fighting force.

GOOD SHOOTING—Dewey's squadron swings around the ellipse while scoring hits on Spanish fleet in Manila Bay.

Flagship USS Olympia

AT THE BATTLE of Manila Bay one might have noted another thing: That there was almost no time when a gun-captain was embarrassed in the firing of his gun by smoke, or by another ship being in the way, or by sudden and quick movements of the ship itself. A little observation would show that the ships were so lined up by the admiral's disposition that no ship ever got between any other and the enemy, and that their direction of movement and of speed were such that each ship kept moving out of the smoke of her guns, and yet moved so slowly, and with so few changes of direction, as to give the gun-captains the utmost opportunity.

Although the ships sometimes drew quite near one another, their captains kept them at as uniform a speed and in as constant a direction as possible, instead of continually working the engines, and excitedly shifting the help from port to starboard and from starboard to port.

Another thing made the duty of the captains easier: In no case was there any trouble with the engines of any ship, or any delay in backing, going ahead, or stopping. This meant an excellent condition of the engines and an efficient condition of the engineer's force, who, far below the water-line, shut in their tight iron boxes, saw nothing of the battle, and felt nothing but the almost unendurable heat of their furnaces and boilers.

SOME THANKS were due to the gun itself, which had been modestly doing its duty. How did that gun get there? Who made it? Why does it shoot so straight? Why does it not burst when it goes off? What makes it stop so gently when it recoils?

Looking with careful eye at this object of his admiration, one finds it to be a tube combining a maximum of strength, elasticity, and ductility with a minimum of weight; rifled along the inside of the barrel, and closed at the rear, or breech, by means of a "breech-block," so ingeniously contrived and accurately fitted that not an atom of the terrible powder-gas, which attains a pressure of thirty thousand pounds to the square inch, escapes past it, and yet which can be opened or closed by one man in an instant.

Inquiry discloses the fact that this gun, and all the Navy guns and their appurtenances, are designed by the Bureau of Ordnance and constructed at the Washington Naval Foundry, and that each of the numerous pieces of steel of which it is constructed was subjected to rigid chemical and physical tests before it was accepted.

Attention passes from the gun to the gun-carriage which supports it. Examine the ingenious and yet strong and simple mechanism by which the carriage and its gun are moved quickly to the right and left on the unsteady platform of the deck. The recoil of the gun is gently but firmly checked by a cyclinder partly filled with liquid, and carrying in it a piston which is shoved along by the recoil of the gun against the resistance of the liquid.

The projectile next claims the attention. Perfectly designed and constructed, each kind of projectile is made from some certain class of steel, according to the special work intended for it; most projectiles are closed at one end by a fuse.

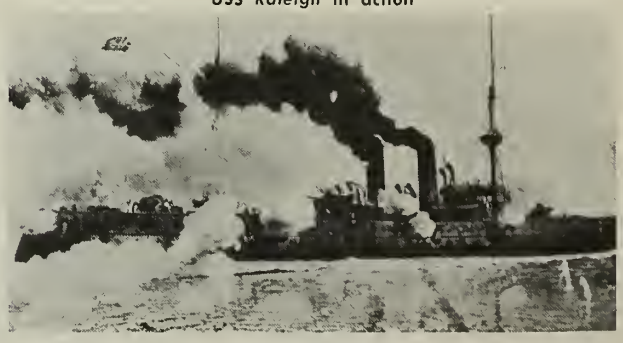
BUT IF THE PERSONNEL and material of the Yankee Fleet worked together with such perfection on the 1st of May, how was it with the Spanish fleet? One answer is perfectly plain, and that is that, granting the superiority of the Yankee Fleet both in force and skill, even then the disproportion of hits could not have been so great, had the shooting by the opposition forces been even fairly good. What was the matter?

This question cannot be confidently answered yet, but a certain line of thought will perhaps lead us to a conclusion not far astray. As to material, we have not been able to gather any data on board the sunken Spanish ships, or at the arsenal, which would indicate that it was bad. In fact, the guns, and all the apparatus and instruments, seem to have been of excellent construction, and supplied by a liberal hand.

It may be the powder was bad, but there is no evidence to prove it; and the immense stores of ammunition in the arsenal, the fine buildings in which it was kept, and the evident care that had been bestowed upon it, indicate the contrary probability; and so far from there being any evidence of lack of organization, of equipment and of careful administration, the excellent and ample arrangements of the offices at the arsenal, the elaborate system of accounts disclosed, the number of offices, clerks, and officials indicated, incline one to the

Steel Cruiser USS Boston

USS Raleigh in action



belief that there may have been too much care, rather than too little, and too much attention to detail. No reason whatever can be found to suppose that the powder was bad, when all the other material seemed so good. We are reduced, therefore, to the belief that the true cause of the bad shooting was the most obvious one—simply bad marksmanship.

Was the bad shooting due to a lack of discipline? There is no reason to believe it; and the usually accepted idea of the Spaniard would tend to make one suppose that there might have been too much discipline, rather than too little. The officers of both the Spanish army and navy represent the best of the blood of Spain, and the literature of both services bears convincing proof of the excellent instruction which their officers have received, and of their devotion to and interest in their service.

The Spaniard is, and always has been brave; and he was brave, very brave, in Manila, on the 1st of May.

Was the bad marksmanship due to the constantly changing direction of the ships, necessitated by their maneuvers? Not at all; for the ships remained in column, and nearly motionless, for the greater part of the time.

But had there been enough drill of the men in the handling and firing of their guns underway, and under circumstances simulating battle? This question we are unable to answer definitely; but the impression which we receive from civilians, natives, and others does not lead us to believe that there was the same labor and time spent on practical gunnery drills at sea as in our service.

But even assuming that this is true, the conditions of quietness under which they used their guns in the battle could not have been surpassed, except on land, so that the work of handling them was reduced to its simplest form, and even inadequate instruction and drill bestowed on men who afterward kept reasonably cool would, it would seem, have produced better shooting than we saw.

TO THE ORDINARY CAUSES for excitement were added the evident unpreparedness of the authorities, and their vacillating measures in preparing for the battle, and what could be more unnerving? All preparations had been made to meet us in Subic Bay, about fifty miles from Manila, and the change of base to Cavite was made only two days before the fight. The change was certainly a wise one, but sudden changes of plan do not inspire confidence. The final dispositions were perhaps as good as could have been made, for the forces of the fleet and the shore batteries supported each other, and both defended the arsenal.

Had there been time, it might perhaps have been better to remove all the guns from *Castilla,* and mount them on shore, where they would have been on a firmer platform, and where the guns and crews would have had better protection, and not have been menaced by the dangers of fire and drowning. But probably there was not time; active preparations had been begun too late. The Spaniards had no idea that Commodore Dewey would come so soon, and they were so sure that he would not dare to come in at night that some of their officers and men were ashore, and did not get off to their ships until after the fight had begun.

That they were unprepared is also shown by the fact that we have been unable to get sufficient evidence that any submarine mines whatever were actually put in place. There is plenty of evidence at the arsenal that

USS Petrel

it was intended to put some in place, because a number of mine-cases are there, partly finished; but no sign is visible of such an essential as an electrical laboratory, where the necessary tests, splices, junctions, and fittings could have been made. Manila harbor was as devoid of torpedo defense as New York harbor; but it did not have close at hand the enormous resources of New York in the way of electric material and trained electricians.

IT SEEMS PROBABLE, then, that the Spanish fleet was taken by surprise, and that the gun-captains fired their guns with too great a lack of coolness and care, though all fought with the courage of despair. Opposed to them was the American Fleet, which gained an advantage over them many times greater than their superiority of force. To explain the reason of the utter disproportion between the forces of the fleets and the damage each inflicted, we find that the American Fleet worked with these advantages:

(1) The Commodore took the Spaniards by surprise.

(2) He took the offensive instantly, and chose his own time and distance.

(3) He so handled his Fleet, and the captains so handled their ships, that the gun-captains were given the most perfect opportunity.

(4) Officers and men were in excellent discipline.

(5) The gun-captains fired straight.

(6) Officers and men kept quiet and cool.

(7) The guns' crews were well drilled, and carried out the orders of their captains quickly.

(8) The guns, gun-carriages, projectiles, powder, fuses, and primers were admirable, and had been kept in good condition.

(9) The ships were well constructed, and had been kept in good condition.

(10) The engines were well constructed, and had been kept in good condition; and the engineers' forces had been splendidly drilled.

(11) There was a feeling of confidence in the mind of every man that the Commodore would do the best thing at every juncture, and this feeling of confidence in the Commodore was also reposed in the captains and officers, and reciprocally was felt by the Commodore, captains and officers toward the men.

The effect of this buoyant and mutual trust cannot be over-valued; and when added to this was a calm "preparedness of mind," and a clear comprehension of the dangers of battle, coupled with "a heart for any fate," we can see why not one single man in all the Fleet, at any stage of the fight, showed the smallest tendency to weaken or do anything unworthy.

THE MEN OF USS *Nereus* (AS 17) have the perfect squelch for any cigarette moochers who may be lurking in their midst. They simply refer them to the ship's electrical shop, where R. W. "Tom Edison" Pickard, EMFN, has invented a contraption to take the "free" out of free-loading.

Pickard's brainchild is a vending machine which dispenses a single cigarette, lit and ready to smoke (this cuts down on match mooching), each time a penny is inserted in the slot. The device is encased in plastic so that the customer gets about one minute of free entertainment watching the ingenious machine in action while he waits for his cigarette to pop out.

After the coin has been inserted and the customer has made his selection as to king-size or regular, the mechanical marvel goes into a complicated cycle. First, the cigarette goes through ultra-violet light for sterilization. Then, it passes through a humidifier, drops onto a heating coil, lights and falls into an ashtray—all ready to be smoked.

Pickard drew up the plans for the gadget and constructed it from discarded parts during off-duty hours assisted by Charles L. Belcher, EMFN, and Curtis L. Johnson, EMFN.

★ ★ ★

As almost any Navy journalist will tell you, it is not good form for a JO to go around trying to get his own name into print. We had assumed that everyone on our staff was above that sort of thing, but it now seems we were wrong.

In a most flagrant violation of the JO's creed, one of our own writers has made a deliberate attempt to get his name into this magazine via underhanded methods—and to make matters worse, he tried this at the expense of nine other men in uniform in a public park practically a stone's throw from the White House.

The whole ugly business took place during a softball game between the Bureau of Naval Personnel and the Intelligence Office, Potomac River Naval Command. (Both teams are members of the Navy Combined League, made up of Navy-civilian squads from naval outfits around Washington, D. C.) The man who committed the breach of journalistic what-have-you pitches for and manages the Bureau team.

All through the game it was obvious that he was thinking of nothing but getting his name into print. In the first three innings he retired nine batters in a row—seven of them on strike-outs and two on fly balls. In the next three, he got nine more in a row—striking out six of them and getting three on pop-ups. Then, in the seventh inning, his desire for publicity unhinged him—he struck out the side on just 11 pitches.

With that obvious bit of grandstanding, the pitcher-manager-writer completed the first perfect game of his softball career. His team-mates (four of whom are also with ALL HANDS) double-checked the score book. No one had reached first. There had been a total of 16 strikeouts, and only one batter had gotten as far as a three-and-two count.

In his quest for publicity, our writer had overlooked just one thing: it would not be fair for ALL HANDS to mention the pitcher's name—just because he happens to write for the magazine—when other Navy pitchers have done the same thing and failed to get a write-up.

So, Jerry McConnell, JO1, USN, your nasty little scheme didn't work after all.

THE United States Navy

Guardian of our Country

The United States Navy is responsible for maintaining control of the sea and is a ready force on watch at home and overseas, capable of strong action to preserve the peace or of instant offensive action to win in war.

It is upon the maintenance of this control that our country's glorious future depends. The United States Navy exists to make it so.

We Serve with Honor

Tradition, valor and victory are the Navy's heritage from the past. To these may be added dedication, discipline and vigilance as the watchwords of the present and future. At home or on distant stations, we serve with pride, confident in the respect of our country, our shipmates, and our families. Our responsibilities sober us; our adversities strengthen us.

Service to God and Country is our special privilege. We serve with honor.

The Future of the Navy

The Navy will always employ new weapons, new techniques and greater power to protect and defend the United States on the sea, under the sea, and in the air.

Now and in the future, control of the sea gives the United States her greatest advantage for the maintenance of peace and for victory in war. Mobility, surprise, dispersal and offensive power are the keynotes of the new Navy. The roots of the Navy lie in a strong belief in the future, in continued dedication to our tasks, and in reflection on our heritage from the past. Never have our opportunities and our responsibilities been greater.

ALL HANDS the Bureau of Naval Personnel Information Bulletin, is published monthly by the Bureau of Naval Personnel for the information and interest of the naval service as a whole. Use of funds for printing of this publication approved by the Director of the Bureau of the Budget 25 June 1958. Opinions expressed are not necessarily those of the Navy Department. Reference to regulations, orders and directives is for information only and does not by publication herein constitute authority for action. All original material may be reprinted as desired if proper credit is given ALL HANDS. Original articles of general interest may be forwarded to the Editor.

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The Bureau invites requests for additional copies as necessary to comply with the basic directive. This magazine is intended for all hands and commanding officers should take necessary steps to make it available accordingly.

The Bureau should be kept informed of changes in the number of copies required.

The Bureau should also be advised if the full number of copies is not received regularly.

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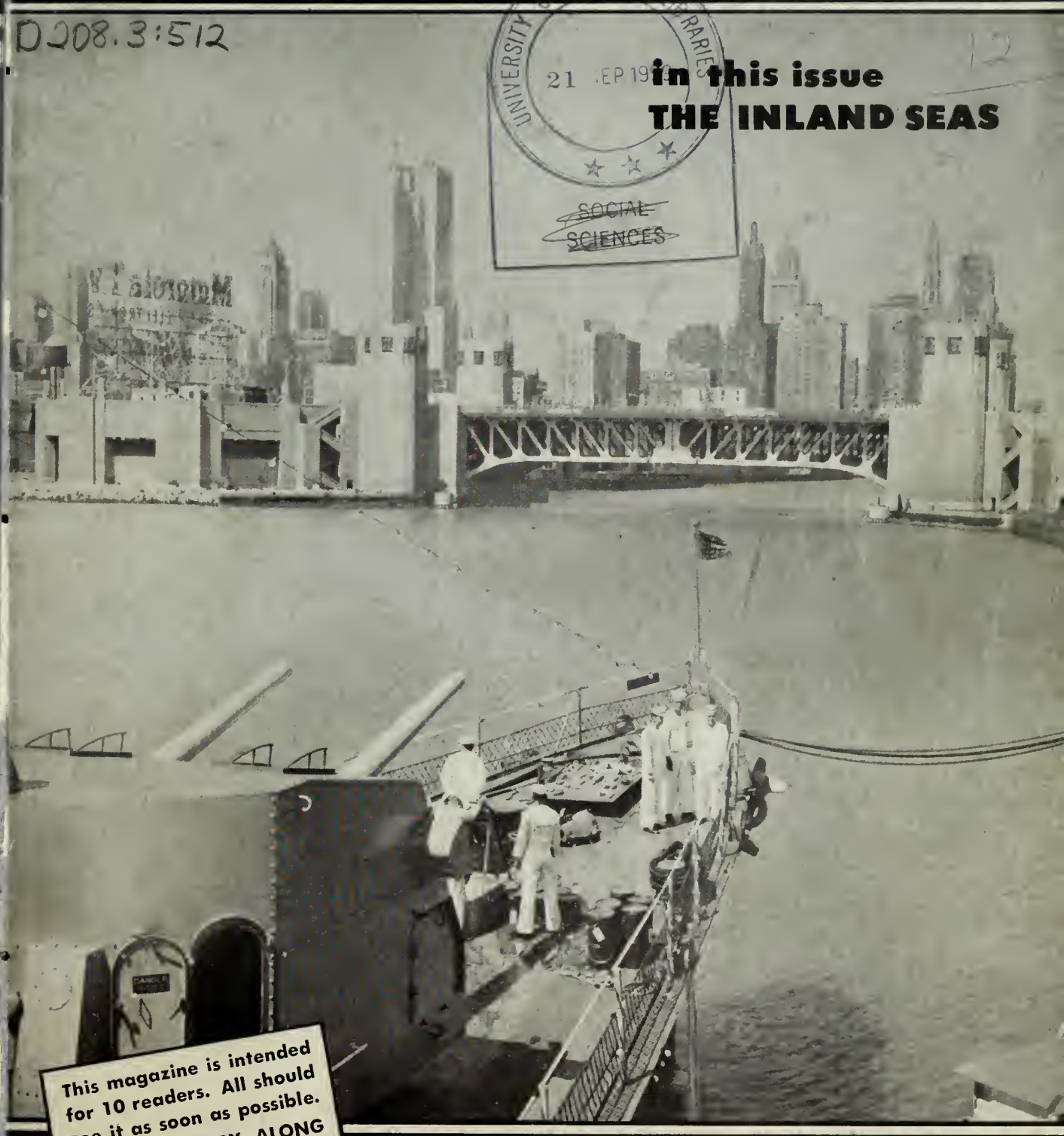
• AT RIGHT: WHOA GAL—Seaman appearing to hold back Fleet tug *USS Tawakoni* (ATF 114) is actually helping placement of a fender to warp tug into place without damage to bow or dock.

A SHARP NAVYMAN

A SMART UNIFORM

ALL HANDS

in this issue
THE INLAND SEAS



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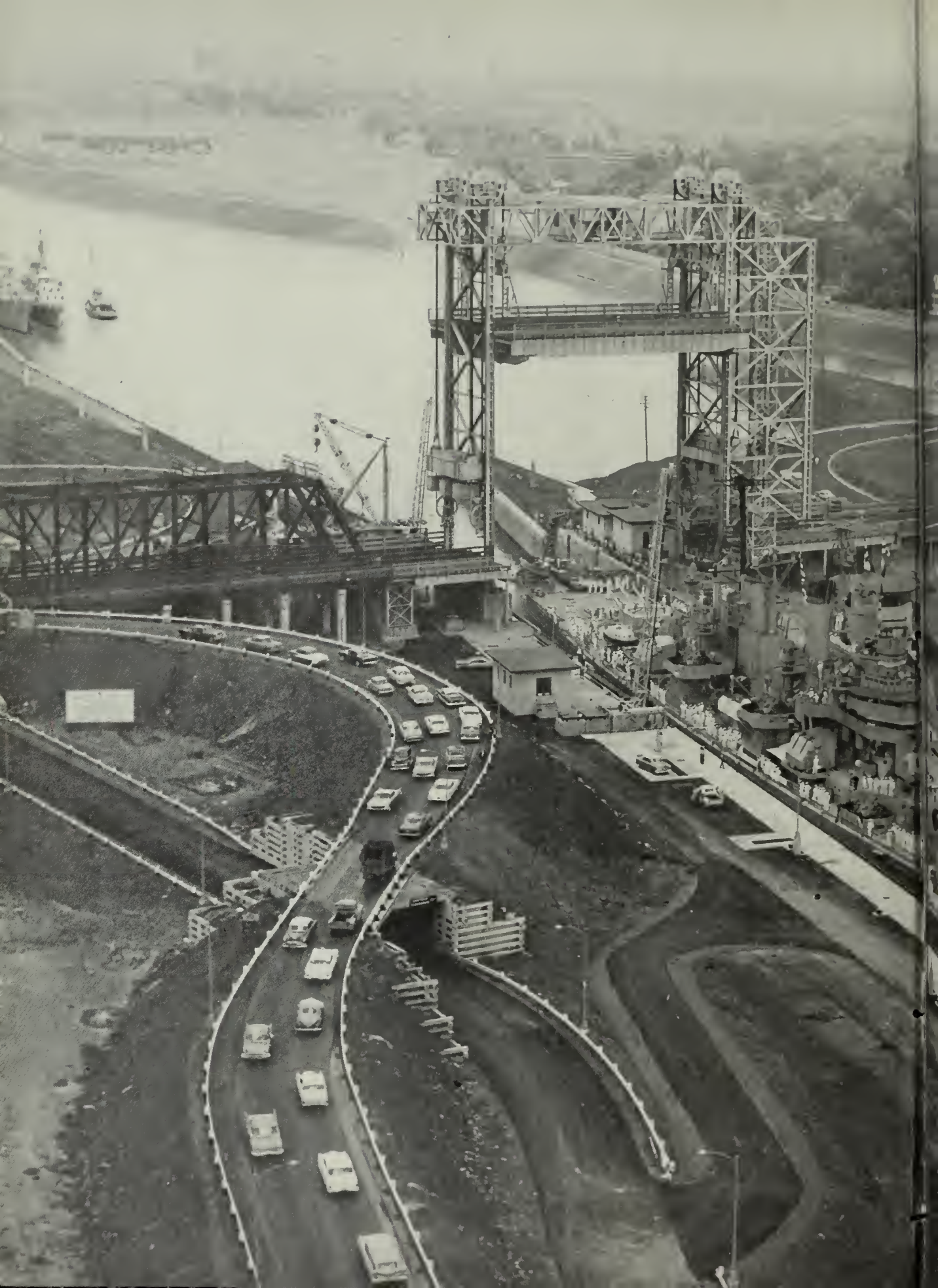

ALL HANDS

THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN

SEPTEMBER 1959 Nav-Pers-O NUMBER 512

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o **FRONT COVER: CHICAGO, HERE WE COME** — *USS Putnam* (DD 757) is seen with Chicago skyline as a background, during visit of Task Force 47—with 10,000 Navymen and Marines embarked—to Great Lakes ports in Operation Inland Seas.

• **AT LEFT: TO SEE THE SEA**—The heavy cruiser *USS Macon* (CA 132) is shown entering the St. Lawrence Seaway's first lock. The largest U.S. Navy ship to participate in "Operation Inland Seas," in connection with the formal opening of the Seaway, the heavy cruiser, with a beam of 73 feet and length of 675 feet, found the locks a close fit.

• **CREDITS:** All photographs published in ALL HANDS are official Department of Defense Photos unless otherwise designated. Line drawings appearing on pp. 8, 9 and 15 adapted from material supplied by St. Lawrence Seaway Development Corporation.

AMERICAN AND CANADIAN destroyers flank the Royal Yacht *Britannia* as she passes USS Macon in Lake St. Louis.

The Fleet Sails

THE CROWD standing along the locks on the Seaway canal watched the battle gray warship heading toward them, and moved closer for a better look.

With a beam of 73 feet plus a few inches—and those inches were important—the heavy cruiser carefully maneuvered into position before the first lock.

"She'll never make it," said a voice in the crowd.

But USS *Macon* (CA 132), moving steadily up the St. Lawrence Seaway, through channels and canals and lock after lock, sometimes with just inches to spare, finally emerged into the open waters of the Great Lakes. At the last lock, the watching crowds clapped their hands and cheered.

And as each of the 28 Navy ships passed through the Seaway—LSDs, a DL, destroyer and amphibious vessels—the crowds gave each ship the same kind of reception. Cars lined up along the banks and turned their headlights on at night to light the way. Drivers honked their horns, sent their hometown bands to serenade the ships, chatted with the busy sailors during the rare lulls, and supplied coffee and sandwiches at stops en route.

THIS WAS Operation Inland Seas. The ships of Task Force 47 were making the exciting voyage to commemorate the opening of the magnificent and historic St. Lawrence Seaway.

Task Force 47, under the command of RADM Edmund B. Taylor, USN, Commander Destroyer Force, U. S. Atlantic Fleet, included the cruiser USS *Macon*, the destroyer leader *Willis A. Lee* (DL 4), 15 destroyers, four submarines, and an amphibious group of seven ships. In the amphib force were an attack transport, two dock landing ships, two LSTs and an attack cargo ship.

Operation Inland Seas got underway when the first of the 28-ship contingent arrived off Montreal on 24 June, and it ended as the last ships of Task Force 47 left the "drowned" estuary of the St. Lawrence and steamed across the Gulf back into the North Atlantic. The last ships were just completing the transit as this issue went to press, early in August.

Some five million Americans who never had seen a Navy ship except in the movies or on TV had a chance to get a close-up look when the Fleet of sleek gray combatant ships sailed into the heartland of the U. S.

THREE SHIPS — *USS Willis A. Lee* (DL 4), *Warrington* (DD 843) and *Macon* (CA 132) line up at St. Lambert Lock.

the Inland Seas

TEN THOUSAND NAVYMEN, including 1500 Marines of the Second Battalion, Sixth Marines, and over a thousand midshipmen from the Naval Academy and NROTC colleges, made up the crews of TF 47. This was the first time an armed Fleet had entered the Great Lakes in 142 years.

The presence of Canadian, British and U. S. warships in the inland waters of the Seaway and the Great Lakes this summer is a historic event made possible by a special arrangement worked out between the U. S. and Canadian governments. The arrangement, limited to this operation, waived the conditions of the Rush-Bagot Agreement of 1817, which provided for demilitarization of the Great Lakes.

The 1817 agreement has been strictly observed by both governments as a realistic safeguard to neighborly relations.

First of the Navy ships to go through the Seaway—on an "orientation transit"—was USS *Kleinsmith* (APD 134), which served as a vanguard for the operation. Representative officers from the other 27 ships of TF 47 boarded *Kleinsmith* for an opportunity to familiarize themselves with the navigation problems involved in the Navy's first major cruise of the Great Lakes since the War of 1812. *Kleinsmith*, the smallest member of the task force, is no stranger to the Great Lakes. She was built and commissioned at Bay City, Michigan, in 1945, and her shallow draft at that time made it possible for her to navigate the river systems.

THE PRESIDENT of the U.S. and Elizabeth II, as Queen of Canada, formally opened the St. Lawrence Seaway on the morning of 26 June, near St. Lambert's Lock. Two 65-foot masts, dressed with flags and pennants, towered over the ceremonial area, and two huge pieces of earth-moving equipment, flanked by the flags of New York States and the provinces of Quebec and Ontario, marked the entrance of a park that was created to celebrate the event.

The passage of the royal yacht HMS *Britannia*, with the Queen and the President aboard, through the ceremonial gate located in the Seaway channel, marked the formal opening.

As they headed through the canal, U.S. Navy ships and warships of Canada were moored in a single line along the north side of the seaway channel in Lake St. Louis, with Canadian and USN ships alternat-

IMPORTANT EVENTS — *Left:* Awed boys view warships. *Right:* Queen Elizabeth is honored by a U. S. military guard.

ing. Dressed with flags, each vessel "cheered ship" as the Queen and the President passed along the Seaway.

A coordinated 21-gun salute—with all ships firing simultaneously—was fired as the royal yacht approached the first ship in line.

This marked the beginning of the history-making cruise that would bring the ships of Task Force 47 some 2347 miles into the heartland of America—as far as Duluth, Minn., on the western tip of Lake Superior.

Meet the Members of Task Force 47

These are the ships of Task Force 47, which sailed up the St. Lawrence Seaway, and then traveled from one end of the Great Lakes to the other, sometimes in rough water and fog, but usually in sunshine and on smooth, freshwater seas.

The 28 ships, which participated in five amphibious landings, chalked up a combined total of close to 100,000 miles.

TF 47 included the 17,000-ton, missile-carrying heavy cruiser, USS *Macon* (CA 132), the biggest ship ever to transit the Seaway, and the frigate USS *Willis A. Lee* (DL 4), flagship of the task force.

Four snorkel submarines represented the underseas Navy: USS *Sablefish* (SS 303), USS *Corsair* (SS 435), and two veterans of WW II service, USS *Torsk* (SS 423) and USS *Quillback* (SS 424).

In the amphibious group were two dock landing ships, USS *Donner* (LSD 20) and USS *San Marcos* (LSD 25). Also represented were the attack transport USS *Cambria* (APA 36), the attack cargo ship USS *Oglethorpe* (AKA 100), and the high speed transport USS *Kleinsmith* (APD 134), plus two tank landing ships: USS *Terrebonne Parish* (LST 1156) and USS *Suffolk County* (LST 1173).

The destroyer force was represented by ships of DESRON 10 and DESRON 22, including their flagships USS *Forrest Sherman* (DD 931) and USS *DuPont* (DD 941). The thirteen other destroyers were USS *Haynsworth* (DD 700), USS *Henley* (DD 762), USS *Ault* (DD 698), USS *Joseph P. Kennedy, Jr.*, (DD 850), USS *Willard Keith* (DD 775), USS *Putnam* (DD 757), USS *Charles H. Roan* (DD 853), USS *Samuel H. Roberts* (DD 823), USS *Forrest Royal* (DD 872), USS *Waldron* (DD 699), USS *Charles R. Ware* (DD 865), USS *Warrington* (DD 843), and USS *John W. Weeks* (DD 701).

A NAVYMAN from Menominee, Wis., or Ashtabula, Ohio, or Muskegon, Mich., would probably never have expected the folks back home to see his ship steaming by the front door—but that is what happened.

In addition to stops at these Great Lakes cities, the Fleet visited Milwaukee, Green Bay, Marinette and Sheboygan, in Wisconsin; Marquette, Sault Ste. Marie, Muskegon, Mackinaw City, St. Ignace, Cheyboygan, Bay City, Port Huron and Detroit, in Michigan; Toledo, Lorain and Cleveland, in Ohio; Dunkirk, Buffalo, Rochester and Oswego, in New York State; Erie, Pennsylvania, and Chicago, Illinois.

The opening of the St. Lawrence Seaway (see page 9) to large ocean-going vessels, introduced the Navy ships to an entirely new coast line on the vast Inland Sea. The Great Lakes cover an area of some 95,000 square miles, bordering the shores of Canada and eight of our states.

To give you an idea of their size, these five Great Lakes—Ontario, Erie, Huron, Michigan and Superior—and their connecting channels and the St. Lawrence River—add up to a coast line of 8300 miles. That is

SEAWAY TRIP gave Navymen *(above)* a chance to see new country. Civilians *(below)* got to visit ships and subs.

greater than the 4840 miles of coast line on the Atlantic, Gulf and the Pacific from Maine to Seattle, Wash. It is greater than the coast line of the huge new state of Alaska.

This is a real Inland Sea.

One incident, perhaps as well as any other, points up the interest all over the U. S. in the opening of the St. Lawrence Seaway. USS *Quillback* (SS 424) carried a little vial with her on the trip, intended to make the cities of Key West and Chicago blood-brothers. A small bottle of Key West sea water, presented to the submarine's skipper by the mayor of that city, made its way up the Atlantic to Montreal, then through the St. Lawrence's canals and locks on into the Great Lakes.

In Chicago, the skipper was commissioned to mix the green Atlantic water with the blue waters of Lake Michigan, as a token of good will toward the citizens of the Inland Sea. Then he presented it to local dignitaries as a symbol of mutual support and common bond between the communities of the fresh-water Great Lakes and the cities overlooking the salt-water oceans.

For more on St. Lawrence Seaway as an engineering feat, its significance to the Navy, and its meaning from the standpoint of national security, see the following pages.

SHARP SHIP—*USS DuPont* neatly cuts through the waters of Lake St. Louis.

The interest in improving navigation on the St. Lawrence goes back to early colonial days. For example, the first canal (connecting Lake St. Francis, adjoining the river, with Montreal) was built by Canada in 1783. And the Welland Canal, which connects Lake Ontario and Lake Erie by bypassing Niagara Falls, was first built in 1829. It was repeatedly improved, the last time in 1932, before the Seaway project got underway.

After the turn of the 20th Century, more and more people began to see the potentialities of the water system, and urged construction of a true ocean seaway. A complicated and time-consuming systems of locks and canals did make it possible for small vessels, "lakers" and "canalers" with a maximum draft of 14 feet, to negotiate the St. Lawrence into the Great Lakes, but that is as far as it went.

Then, in 1951, Canada decided to go ahead with the long-dreamed-of project, created the *St. Lawrence Seaway Authority* and invited the U.S. to make it a joint effort. Three years later, in the United States, with the backing of the National Security Council, the Chairman of the Joint Chiefs of Staff and the President, Congress passed the Wiley-Dondero Act.

It became Public Law 358 on 13 May 1954, and established the *St. Lawrence Seaway Development Corporation.*

UNDER THE JOINT SUPERVISION of these two organizations, one Canadian and the other U.S., the ocean seaway finally got to a start. Work was divided into four general sections.

- Near Montreal, four new locks were built by Canada, two on the Beauharnois Canal and two more on the Laprairie Basin Canal, bypassing the Lachine Rapids.
- In the International Rapids Section, to bypass the rapids, the U. S. built the long Wiley-Dondero Ship Channel south of the river, with two locks. A seventh new lock,

The St. Lawrence Seaway—

How To Build a Fourth

WHAT IS THE ST. LAWRENCE SEAWAY?

Despite the fact that this great engineering feat has been completed, and the seaway itself has been in operation for some months, the average Navyman, as well as the man in the street, does not yet realize its significance.

Here are some facts, statistics, and a few items of history to get you better acquainted with the United States' and Canada's mutual "Fourth Sea Coast."

The St. Lawrence, one of the strategic rivers of the world—about 740 miles long — connects the Atlantic Ocean with the Great Lakes, thus providing a 2600-mile waterway from the Atlantic Ocean to the eastern shore of Minnesota, right in the heart of America.

USS Joseph P. Kennedy, Jr., moors besides Chicago's Merchandise Mart.

For a good distance of its length, it has always been navigable by ocean vessels. Discovered by Jacques Cartier in 1534, it provided a route for early settlers heading for the interior of the U.S. and Canada.

The trouble with the St. Lawrence has been that—in two areas particularly—a series of rapids made navigation difficult. In other areas the river was shallow, dotted with shoals and island obstructions. Thirdly, from its mouth to its source at Lake Ontario, there is a rise of some 246 feet. Finally, between the first and second of the Great Lakes connecting with the St. Lawrence, there is an even greater difference in the water leves—326 feet.

In other words, to get from the Atlantic Ocean on to Lake Erie, a ship has to be lifted 572 feet.

TO MAKE IT a true seaway, navigable to large ocean-going vessels, the St. Lawrence required widening and deepening of its shallow channels. It needed a system of canals that would bypass the rapids, and it needed a system of locks that would raise the ships along the route.

near Iroquois, was constructed by Canada.

• In the Thousand Islands section, necessary dredging of the river bottom, removal of shoals and whole islands, was carried out by the United States.

• At the Welland Canal, Canada undertook to deepen the lock system and approaching channels.

This, very briefly, gives a picture of the work that had to be done on the Seaway project. Much of the work overlapped, calling for the closest kind of teamwork and coordination between the two countries. In addition, the over-all program included the development of hydro-electric power projects. These were carried out by agencies under the supervision of the province of Ontario and the state of New York.

The total cost ran to slightly more

Sea Coast

than a billion dollars. The Seaway program cost an estimated $465,000,000, while the cost of the hydro-electric power projects ran even higher, about $600,000,000.

THE ABOVE FACTS give only a bare idea of the tremendous job performed. All this involved a great amount of planning, engineering know-how, and plain hard work:

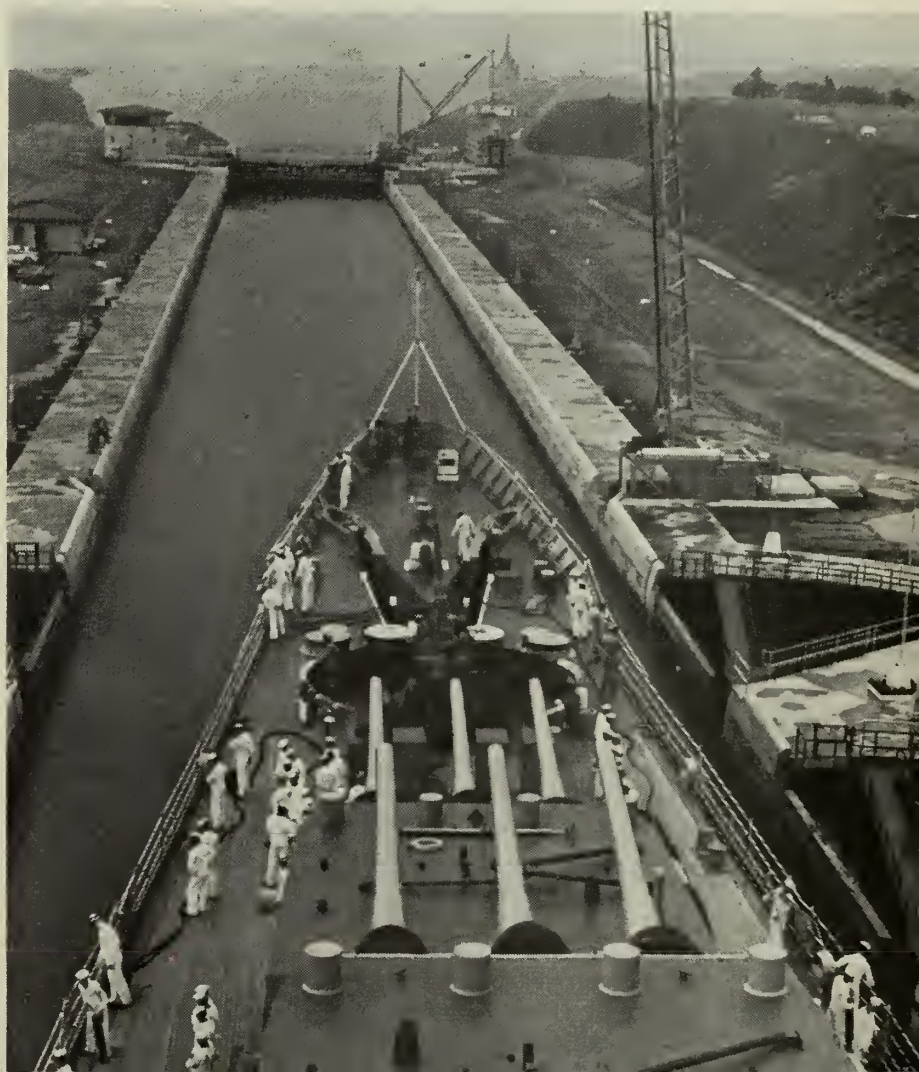
• It meant excavating about 200,000,000 cubic yards of earth and rock. Twenty miles of dikes had to be built, some 50 feet high, and 10,000,000 cubic yards of earth were piled up and packed solidly to build them. The concrete used in the project totaled more than 6,000,000 cubic yards.

• Fifteen thousand men performed the labor of dredging, digging, hauling and building the great Seaway. When the work was at its peak, in 1957, the total number employed was 22,000.

• They removed whole islands, cut channels, filled in access areas, constructed roads, built bridges, shifted highways and some 40 miles of railway track.

• Dams that were built for the development of electric power created a brand-new Lake St. Lawrence, which is four and one-half miles wide and 28 miles long, covering 38,00 acres. The lake made it

DETROIT RIVER *(above)* gave some Navymen making St. Lawrence trip a chance to relax. Passing through Welland Canal *(below)* was not so easy.



SPLASH—*USS Henry B. Wilson* (DDG 7), largest warship ever built on the Great Lakes, is launched in Bay City, Mich. She'll go to sea via St. Lawrence.

necessary to move towns and villages to higher ground.

• In N.Y. the town of Waddington was partly relocated, while Ontario saw the whole town of Iroquois shifted. The Canadians set up three completely new communities, providing new utilities systems, sewage, electricity and shopping centers. To move the towns, houses were lifted and placed on floats, then carried to their new sites.

• The equipment alone was evaluated at $60,000,000. It included 500 heavy trucks, 250 bulldozers, 150 big shovels and draglines, and 15 dredges.

AS A RESULT *of all this work, what does the Seaway offer?*

It opens the St. Lawrence River, and the Great Lakes as well, to ocean-going ships—ships 710 feet long, with a 75-foot beam and 25-foot draft, and with a bulk cargo capacity of 25,000 tons. (Before this, it was limited to ships of 250-foot length, 43-foot beam, a draft of 14 feet and a 2500-ton cargo capacity.)

There are seven new locks on the upper St. Lawrence, each of which can be filled in only eight minutes—as fast as or faster than any other locks in the world. (They replace 18 antiquated and time-consuming locks of drastically limited size.

With the seven locks on the St. Lawrence and the eight enlarged locks on the Welland Canal, the Seaway is expected to increase its tonnage by 500 per cent, from 10,000,000 tons to more than 50,000,000 tons in 1960—carried by ships sailing to and from all the oceans from anywhere in the world.

WHAT IS *the significance of the St. Lawrence Seaway from the standpoint of national security? Is the Navy affected?*

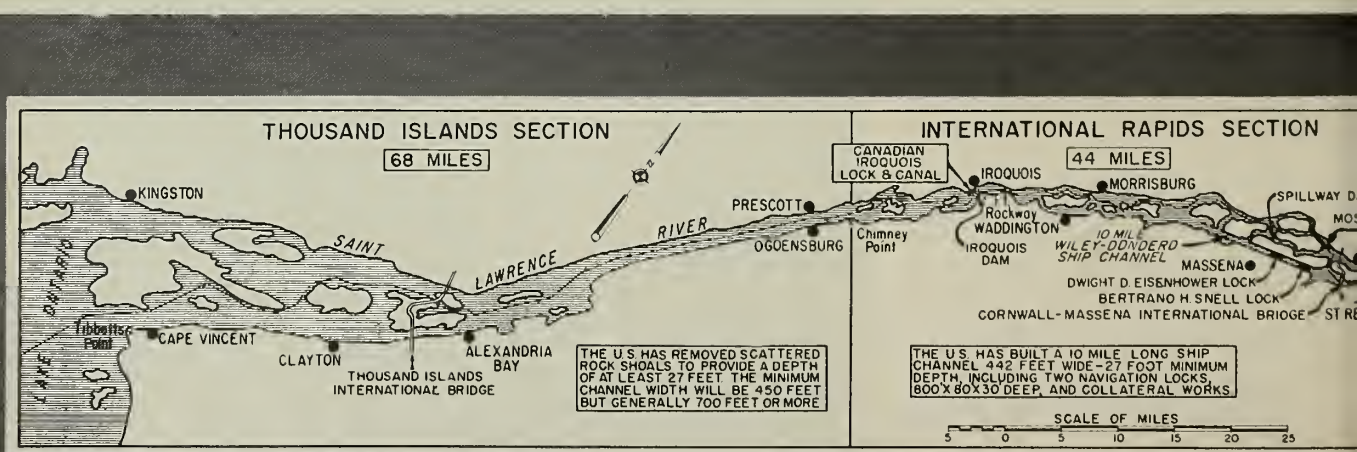
What the Seaway has created for the United States and Canada is a Fourth Sea Coast—and this sea coast is one which will not have to be protected by Navy ships or military installations, except from a mutual enemy. The U.S.-Canadian border is the longest one in the world unguarded by armed forces.

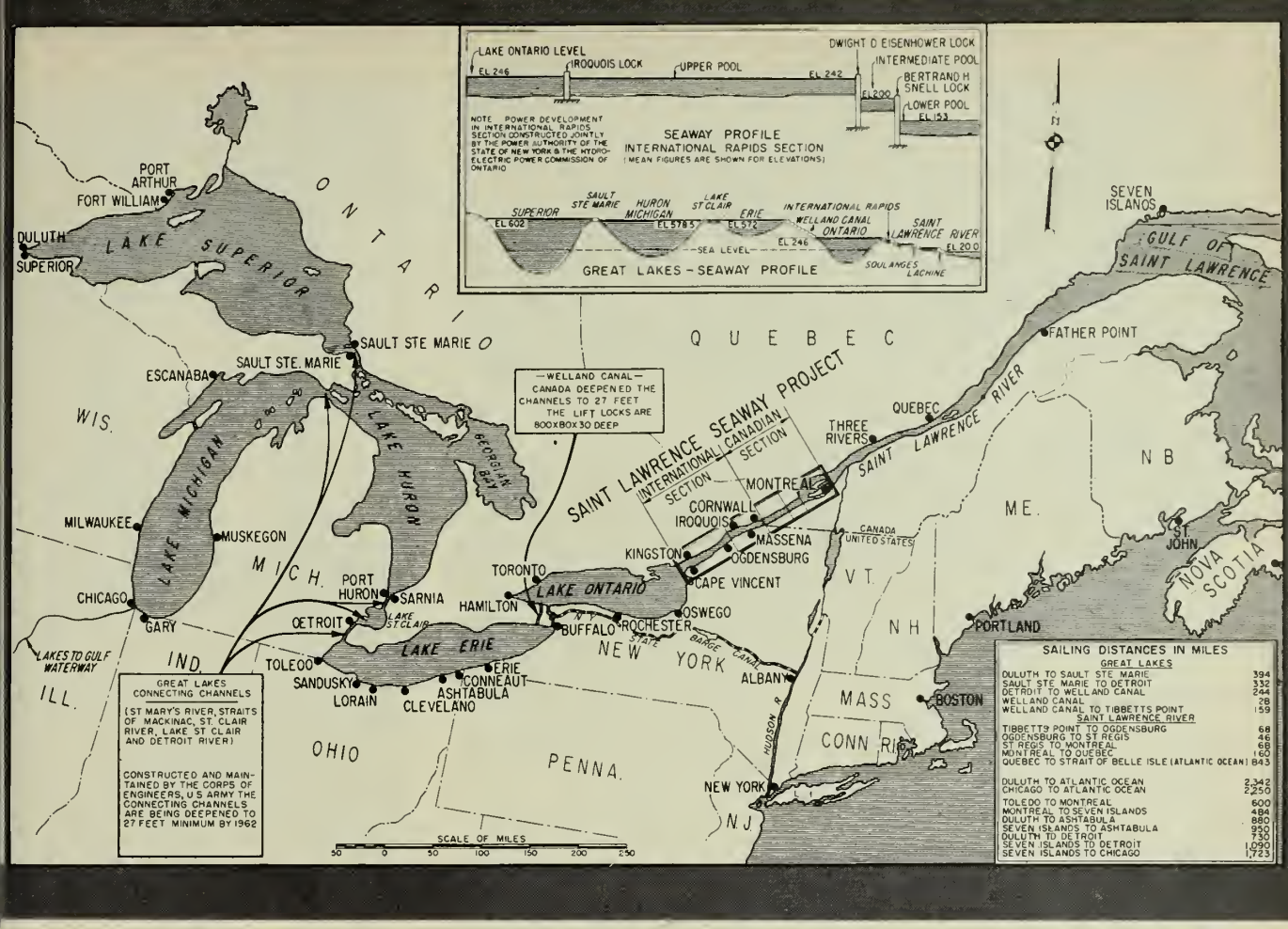
At the same time, this fourth sea coast opens up a large area for Navy shipbuilding. Great Lakes shipyards, of course, have long been famous for the sturdy "lakers" which they build, and during World War II they also built smaller naval warships which had to be able to negotiate the rivers to reach the high seas. Anything larger would have been trapped inland.

• Now ships as large as a heavy cruiser, or a landing ship dock, or a destroyer leader can make it to and from the Great Lakes. Earlier this year the Navy's first guided missile destroyer, USS *Henry B. Wilson* (DDG 7), hit the fresh water of the Great Lakes at her launching in Bay City, Mich. She will use the St. Lawrence Seaway to join the Fleet.

• Soon after launching *Wilson*, the Navy started conducting preliminary sea trails in Lake Erie on its new 442-foot-long, 8600-ton ship, USS *Wood County* (LST 1178). Aboard the ship was Captain A. B. Jones, USN, Supervisor of Navy Shipbuilding on the Great Lakes.

• Other major contracts awarded to Great Lakes shipbuilders by the Navy include three guided missile destroyers and ocean-going minesweepers, and a variety of small craft. Great Lakes shipbuilders currently hold Navy contracts which total over a hundred million dollars.





In the event of mobilization, it would make sense to diversify and use inland facilities for additional shipbuilding, especially since coastal facilities with their shipbuilding potentialities would be a prime target of the enemy.

The Seaway, of course, would also be open to attack in the event of such mobilization. But under such conditions it would be strongly defended, like the Panama Canal, the coastal cities, the manufacturing industries and other vital installations.

The Seaway is of significance to the Navy in another way—from the standpoint of convoy duty in the event of war. This inland route, via the Seaway from the Great Lakes and their heavy industries, shortens the high seas portion of the voyage to Europe by over a thousand miles.

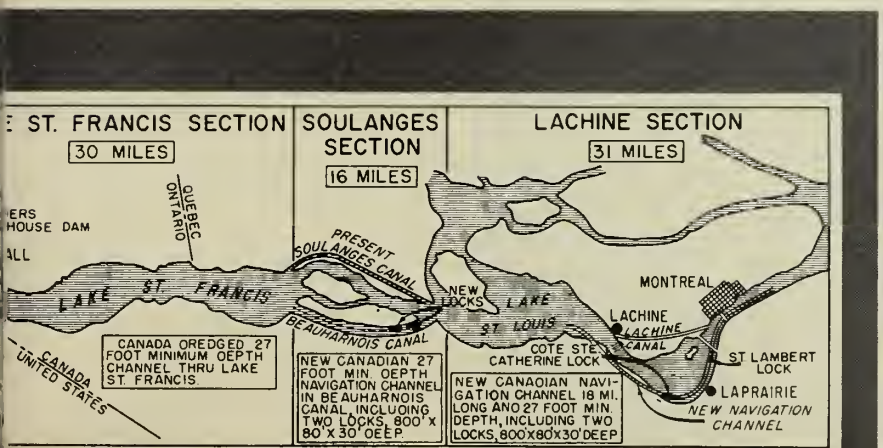
Ships on-loading at Great Lakes ports would not require naval assistance until they reach the Atlantic, and once in the Atlantic they would be right on the shortest route to Europe. They would require fewer Navy ships for convoy protection, thus freeing Navy ships for convoy duties from other ports on the Atlantic, Gulf and the Pacific.

Here's a good example. Ships carrying iron ore from Labrador—an excellent source of good quality iron ore—travel only a distance of 650 miles before they reach the borders of New York on the St. Lawrence River. A little further on are the steel mills of Pennsylvania, and the Great Lakes plants. For only a very short distance of that voyage would they require a naval convoy in time of war.

The same ships, traveling from Labrador over the Atlantic, say to Philadelphia, would have to travel in the face of threatening enemy submarines for a distance of 1389 miles. They'd need a convoy all the way.

The St. Lawrence Seaway is a source of tremendous hydro-electric power, and on its route is an unending stream of raw and finished products.

And the nice thing about it is that this new Fourth Sea Coast leaves the U. S. and Canadian Navies free to devote their attention to guarding their other three coasts.



TIGHT SQUEEZE—Teamwork took Navy's large ships through tight spots.

Below: Shipfitters fix screw guard.

It's Tops

"I'VE BEEN THROUGH the Panama Canal and the Suez too—but this is a real test of shipboard teamwork and seamanship."

This was Commander Joe (Joseph C.) Spitler speaking, skipper of the destroyer USS *DuPont* (DD 941), flagship of DESRON 22. In addition to being one of the first Navy ships to negotiate the new St. Lawrence Seaway, *DuPont* had an added assignment—that of escorting the royal yacht *Britannia,* with the Queen aboard, during a large part of the journey up the canal and lock system of the St. Lawrence.

"It was our second day on the Seaway. A heavy fog set in. Through narrow channels—confined water—we were buoy-hopping.

"At times we couldn't see the fo'c's'le and some buoys weren't visible until they were already past the bridge.

"Serving as an escort to the Queen's ship," the *DuPont* CO said, "we were going as fast as we could in the restricted waters of the chan-

HEAD COACH — CDR J. C. Spitler, skipper of *USS DuPont* (DD 941) passes the word as crew sails ship through.

—Navy 'Seawaymanship'

nel. The royal yacht was beautifully handled. And we had to be right there with her.

"Every man in our crew was on his toes. They were a real credit to the ship and to the Navy."

The transit of the St. Lawrence Seaway was an all-hands operation from the skipper and the navigators down to the ship's cooks. It was all new—and there were cross currents, sharp turns, and the locks.

"Every spare hand was assigned to the sea detail," said *DuPont's* exec, LCDR William St. George, USN. "We needed more than the usual number of line handlers—and on both sides of the ship. Going through the locks, sailors had to handle fenders on both sides to be sure we wouldn't scratch or tear the hull.

"We had to be especially careful with those fenders. Manila fenders are not used since, if dropped, they might sink and jam the flood gates. Instead, wooden or rubber pneumatic fenders are prescribed."

WHY DID THE St. Lawrence Seaway represent itself as a challenge to Navy seamanship? First of all, the Seaway is new, more complicated than the Panama or Suez Canals, and these were the first Navy ships to make the transit. Secondly, included in Task Force 47 were the largest ships ever to make the transit —fighting ships built with sloping hulls for high-speed ocean traffic, not cargo vessels especially adapted to cope with canal lock systems.

If you can envisage a Navy ship like the lumbering LSD *Donner* sailing into an elevator and ascending to a height greater than the Washington Monument (and more than three times as high as the Niagara Falls) —and then sailing off into a 95,000-square-mile fresh-water ocean, you can understand both the accomplishment of the St. Lawrence Seaway and the Navy seamanship involved.

The 28 ships of TF 47 used a series of 15 locks, the water equivalent of elevators, to make their ascent, and they climbed a total of 572 feet above sea level, some 17 feet higher than the top of the Washington Monument.

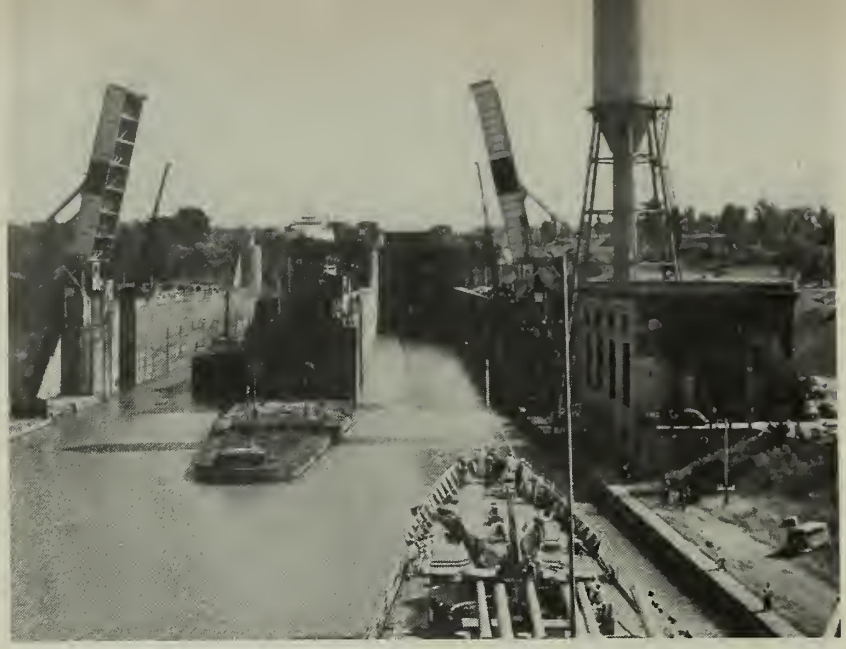
RADM Edmund B. Taylor's Task Force put its ships, and their crews and the great new canal and lock system of the Seaway to a rigid test, and all three came through with flying colors.

If a modern naval armada, with hulls geared for 32-knot speed rather than the squat sides of cargo vessels, could make the transit, it would point up the fact that the St. Lawrence was really able to cope with the problem of ocean-going ships making the trip to the Great Lakes.

THE ST. LAWRENCE is a wide, easily navigable river—as far as Montreal. At its mouth it is almost 90 miles wide, and the salt water of the Atlantic moves many miles up its route.

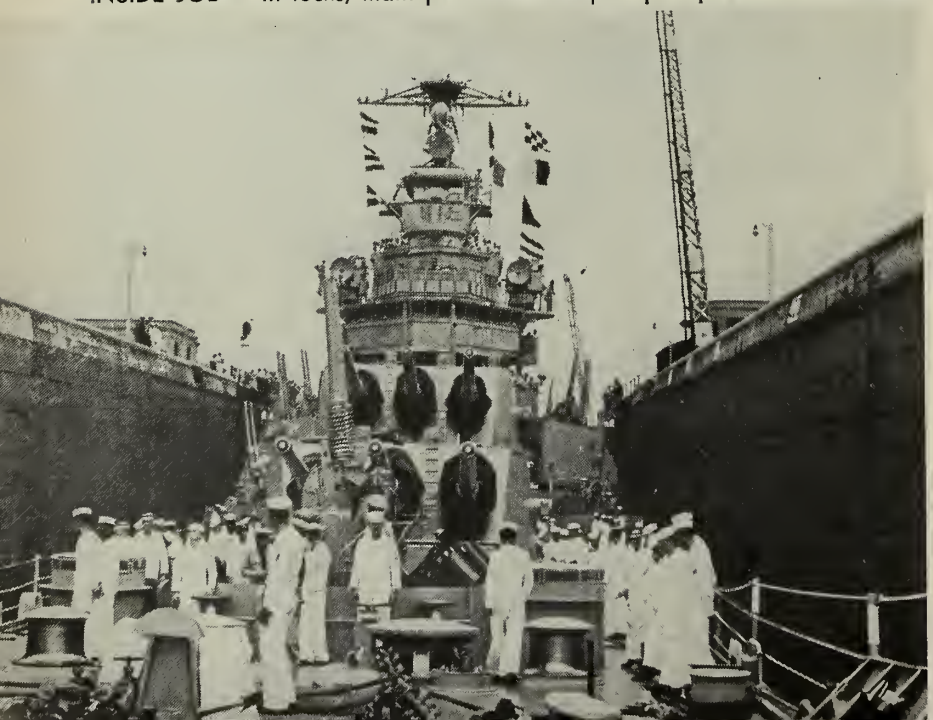
Five hundred miles upstream, just west of Montreal, is the start of the first series of canals and locks. This is where Seawaymanship begins.

• Skirting the Lachine Rapids,



LOCK UP — First lock on Welland Canal looks small as heavy cruiser USS *Macon* approaches. *Below:* Good seamanship brings *Macon* through the lock.

INSIDE JOB — In locks, main job was to keep ship in position at all times.



the ships of TF 47 made their way through St. Lambert Lock and Cote Ste. Catherine Lock, into Lake St. Louis. The first rise brought them to an elevation of 46 feet.

• Then, steaming across Lake St. Louis, they entered the Lower and Upper Beauharnois Locks, which raised them another 84 feet. From there they entered and crossed Lake St. Francis.

• They bypassed the International Rapids through the Wiley-Dondero Ship Channel with its two locks, Bertrand H. Snell Lock and the Eisenhower Lock, also known as Ike's Dike. The rise here was 89 feet.

• This brought them into the man-made Lake St. Lawrence. Last of the locks to be negotiated was the Iroquois Lock, where the rise at times is barely perceptible. When USS *DuPont* went through, she rose a mere three and one-half inches.

• Then they came into view of one of the most beautiful sights in the world—the Thousand Islands of the St. Lawrence. There are a few less than the original "1000 islands" now, since the dredgers and blasters have cleared the channel for the Seaway, but the view is just as beautiful as ever. And a lot less tricky. Gone are the shoals, the blind alleys, the wildly meandering route.

• Beyond the Thousand Islands, the ships of the Fleet entered the blue waters of Lake Ontario. Steaming across the first of the Great Lakes they headed for the next hurdle, and this was a real one—the Welland Canal with its seven lift locks and one guard lock. This detour around the Niagara Falls took them 326 feet higher—and into Great Lake No. 2, Lake Erie.

Only one more set of locks was on the list—for those ships heading for the most westerly point on the Great Lakes—Duluth, on Lake Superior. The lock system is at Sault Ste. Marie, connecting Superior with Lake Huron.

HERE'S AN EXAMPLE for those Navymen who are not steersmen, navigators or deck specialists.

Have you ever tried parking a car, five feet wide, in a concrete-walled stall barely seven inches wider? That leaves you just three and a half inches leeway on either side.

It sounds tough, but just imagine this additional situation: a sudden onrush of tons of water bursts out from the wall, pushing against one

side of your parked vehicle, shooting under, then hitting the concrete and putting its full force on the other side of you.

Try this a dozen times—fifteen times.

Now, imagine a warship in the same situation, say a warship the size of USS *Macon*. The biggest ship ever to go through the St. Lawrence, she has a length of 675 feet. According to the statistics, ships of her class have a beam of 72 feet, but *Macon* must have put on weight. Measurement showed there were 73 feet plus a few inches of ship that required clearance.

Next, take the governing measurements for ships on the St. Lawrence's lock system. Maximum length: 710 feet. Beam: 75 feet (the locks are 80 feet wide. Controlling channel depth: 27 feet).

Macon had to unload 2000 tons of ammunition and fuel so as not to ride too low in the water on the Seaway. In addition, the height of her mast was reduced by 26 feet to insure clearance under the bridges.

The other ships of TF 47 met with similar problems. The two LSDs, USS *San Marcos* and USS *Donner*, both have beams about as great as *Macon*—72 feet. The attack transport USS *Cambria* has a beam of 70 feet, and a draft of 26½ feet, six inches short of the maximum 27-foot allowable draft. The LSTs, with beams of 62 feet, and a draft of 18 feet, were somewhat better geared to cope with the problems of lock size, but they did not have the same maneuverability.

The attack cargo ship USS *Oglethorpe* could not make the transit fully loaded. If she had, her 11,000-plus tons would have made her draft 28 feet, one foot deeper than the allowable maximum.

USS *Forrest Sherman* and *DuPont* and their fellow destroyers were, of course, smaller than most of the other Fleet ships to negotiate the Seaway, but they had special problems. For example:

"On the destroyers," said CDR Spitler of DD 941, "there is the possibility of the propeller guards riding up over the sea walls. This entails the necessity of installing a large wooden camel or fender to give us a lower screw guard.

"But it has to be portable. You can't leave it rigged all the time, at least not on the DDs, since it would hinder their movements on the open seaway."

ON GUARD — Screw guards took beating as the big Navy ships moved slowly through canals. *Below:* Great Lakes pilot shares experience with Navy.

Guy T. Costa, QM1, USN, assistant navigator of *DuPont* and a veteran of numerous Panama Canal transits, mentioned some of the problems of shiphandling.

"This transit is more exciting, tougher, more of a test of seamanship, than Panama. Here the ship has to depend a great deal more on the crew.

"We had a 238-man complement, and practically every guy who wasn't assigned to duty below decks with the engine gang had a job to do on deck.

"On the Panama Canal, you have those mechanical mules to do a lot of the dirty work. Here it's seamanship, and we don't have a canal pilot all the way, as you do at Panama."

As assistant navigator, Costa twice did stretches of 20 hours at a time,

INLAND SAILOR — G. T. Costa, QM1, USN, assistant navigator of *DuPont*, admires view of Chicago skyline after completing history-making voyage.

the first time when the destroyer was starting through the locks, and then on its way through to the Detroit River.

DuPont's CO, like the skipper of the 27 other Task Force ships, averaged less than two hours of sleep a day, snatching a few winks at a time.

"But it's not just a matter of the skipper's conning the ship—it was an all-hands operation.

SEAWAY DDS—Ships like *USS Warrington* (DD 843) showed skill in Seaway.

"You have to depend on the engineers for that fine touch on the throttles, that delicate touch on the screws," Spitler said.

BOATSWAIN'S MATES, acting as lookouts on either side of the big Navy ships, used hand signals to let the officers on the bridge know how close they were to scraping the lock walls. On occasion, crew members could reach out and touch both walls of the lock at the same time.

And regardless of the ship, as they went through the Seaway, the situation provided the same kind of tension. There were endless hours on the bridge. The men at the wheel, the best in their ships, steered them without actually seeing where the ship was heading. Their eyes followed every quiver of the compass needle as they reacted to the order from the captain on the bridge.

"The toughest maneuvering job was in the locks," said destroyer skipper Spitler. "On the Seaway proper and in the Welland Canal, you have to maneuver the ship all the way into the lock, then bring it to one side, where the ship handlers secure it with the ship's own lines—all the time thinking of those exposed propellers and flared bows.

"Once you're secured, the flooding process begins. As the lock gates open, water rushes in, tending to push the ship away from the side to which it is tied, then as it hits the other side of the ship, there is pressure to push the ship back against the concrete wall.

"Getting out of the locks is tricky, too. Normally you'd back out. Here you 'work' the ship out, spring out the bow, come out fast, always fighting that suction that would pull you back in if you're moving too slowly.

"Then it's ahead slow, say 10 turns of the screw."

ONE SECTION of the Seaway, he said, a channel some 16 miles long, had an appearance similar to the Suez Canal. But here ships traveling in opposite direction in the narrow channel appear to be steaming head on for each until they're about 500 yards apart. At this point each gives way to starboard, then veers toward the other as they get ready to pass.

Pretty to watch, not so easy to do.

But Task Force 47 came through the Seaway with colors flying. There were only a few minor mishaps. The LST *Suffolk County* damaged its

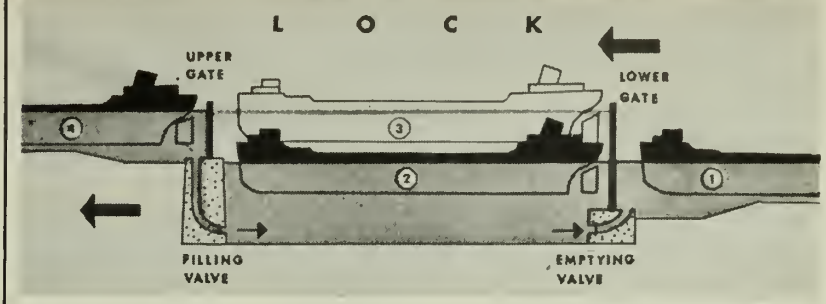
anchor windlass on the Lake-bound journey. Damage occurred to the starboard propeller of USS *Terrebonne Parish* (LST 1156), when the prop struck a submerged object in the Seaway channel just below the Iroquois Lock.

Replacement parts were flown in from Norfolk Navy Shipyard to Erie and then trucked to Ashtabula, Ohio, for a rush job.

The destroyer *Putnam*, scheduled to escort Queen Elizabeth's yacht to Chicago, damaged a propeller while scraping bottom near St. Ignace, Mich., and put into Milwaukee for repairs. She made it to Chicago in time for the big events.

In the Welland Canal, *Macon* ran into trouble, partly owing to tricky winds and currents. Shortly after entering the canal, the cruiser ripped off her protective propeller guard in a stairwell of Lock No. 1. Again in Lock No. 2, two steel cables were snapped off, and the difficulties continued in Lock No. 3, where quick work had to be done with shore winches to avert damage to the ship's side plates.

She came through without a scratch to her hull, thanks to the top seamanship of her skipper, Captain J. C. Wylie, USN, and his crew.



1. Ship entering lock chamber going up stream. Lower gate open, emptying valves open, upper gate closed, filling valve closed. Water in lock at lower level.
2. Ship in lock chamber. Lower gate closed, emptying valves closed, upper gate closed, filling valves open, water level in lock rising.
3. Ship in lock chamber. Lower gate closed, emptying valves closed, upper gate open, filling valves open, water in lock at upper level.
4. Ship now at upper water level sails out of lock.

FIRST TO COMPLETE the transit of the Seaway from the mouth of the St. Lawrence to the waters of Lake Erie was USS *Cambria*, the amphibious force flagship. As she came through the last lock a few minutes after midnight, despite heavy rain and the late hour, the last 15 miles of the Welland Canal was lined with autos and cheering crowds. She then steamed in the vicinity of Ashtabula to stand by until the rest of the flotilla transited the locks.

How did the 10,000 Navymen and Marines enjoy the historic voyage up the Seaway? The general consensus: tough, exciting and enjoyable.

The following incident illustrates the general attitude that the crews displayed:

It was just a few minutes before 0600, the second day of transit through the canals and locks. Every man in the destroyer *DuPont* had been up for hours—engineers, navigators, deck hands, line handlers, cooks and bakers either to work, or just to watch.

The Bosun's Mate of the Watch reported to the bridge to ask the skipper a question.

He asked permission to pass Reveille as usual, at 0600—just for kicks.

Permission granted, reveille was passed, amid hoots and hollers from everyone on deck, and ships close at hand.

The crew then went on working as before, in high spirits.

Navy Puts In at Put-In-Bay Once Again, After 146 Years

IN A SPECIAL memorial ceremony at Put-in-Bay, Ohio, during Operation Inland Sea, a Navy rear admiral paid homage to one of the service's most illustrious heroes, Commodore Oliver Hazard Perry. At the age of 28 Perry led an American squadron of ships to a hard-fought victory over a British force in the Battle of Lake Erie, 10 Sep 1813.

Thus, 146 years after U. S. Navy warships last sailed on the Great Lakes, the destroyer leader USS *Willis A. Lee*, with Rear Admiral E. B. Taylor, USN, Commander of Task Force 47, embarked, put in at Put-in-Bay, the harbor of South Bass Island.

Commodore Perry used the bay as headquarters for his American Fleet of nine ships just before sallying forth on Lake Erie to do battle with the British, in the War of 1812.

The ceremony honoring the naval victory and its dead was held at the Perry Memorial. This is one of the Nation's most imposing monuments, a beautiful Doric column of Milford granite rising 352 feet above the crescent-shaped bay. Erected in 1913 at a cost of $500,000 after a nationwide architectural contest, the Perry Memorial stands in a National Park in Put-in-Bay, approximately 25 miles east of Toledo.

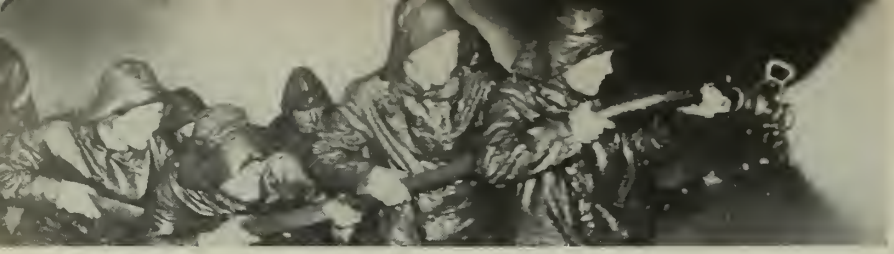
It was on 10 Sep 1813 that the daring naval tactician, Commodore Perry, had to leave his flagship, *Lawrence*, riddled by British shot and shell, to go aboard the ship *Niagara* and sail it between the British ships, raking them with broadsides and forcing surrender of the entire enemy fleet.

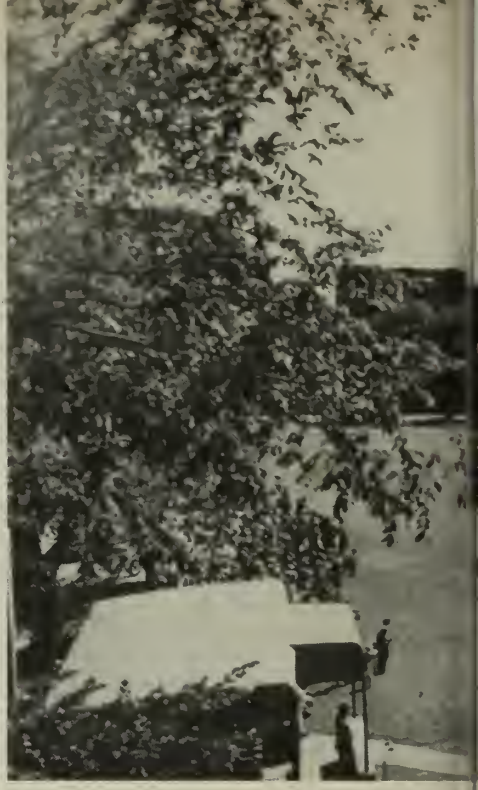
He then sent his famous message to American General Harrison, waiting anxiously on shore: "We have met the enemy and they are ours," listing two ships, two brigs, one schooner and one sloop.

American control of Lake Erie enabled GEN Harrison to invade Canada and successfully conclude the War of 1812 in the northwest.

Commodore Perry died 23 Aug 1819 on the island of Trinidad, Port of Spain, 34 years to the day from date of his birth 23 Aug 1785, at South Kingston, R. I. His remains were brought home in honor in 1826 aboard the U. S. sloop of war *Lexington* and reinterred with the final rites of a military hero, at Newport, R. I., 4 Dec 1826.

Perry's memorial at Put-in-Bay rises close by the common grave of three American naval officers and three British officers who died in the Lake Erie naval engagement.





This Is

With Task Force 47 visiting numerous Great Lakes ports this summer, the midwest and the nation were reminded that—while armed warships are something of a rarity on the fresh waters of the Inland Seas—the Navy itself is no stranger to these parts. In fact, right on the shore of Lake Michigan is a vital naval installation known as NTC Great Lakes.

LARGER THAN THE principality of Monaco, the Great Lakes Naval Training Center is the biggest naval installation in the midwest. Currently it has just about the same permanent population as Monaco, plus transients too, and although there are no casinos, there is a beautiful view overlooking the water.

This is where the comparison ends. For Training—not Tourists—is the big business at NTC Great Lakes.

Situated just outside of Chicago, within short distances of many other Great Lakes cities and within the reach of a vast farm population, this location appeared to early planners to be the logical spot for the Navy to establish a training center for recruits from the midwest states.

One third of the sailors joining

NTC Great Lakes

the salt water Fleet—particularly in wartime—have come from the midwest. NTC Great Lakes, a veteran of World Wars I and II and the Korean conflict, has served primarily as a recruit training establishment, introducing these new Navymen to seamanship, customs and traditions, rocks and shoals.

During World War II, Great Lakes trained one million sailors, one out of every three in the wartime Fleet. Chalking up another record, NTC trained and processed twice as many as any other Navy installation in the country.

But recruit training, while it is the major function, is not the only one at this center which covers approximately 1400 acres of crowded naval facilities. Here also you'll find the following:

• NTC Great Lakes is the headquarters of the *Ninth Naval District* —the largest in the nation, naturally —covering 13 midwestern states. The job of the Commandant 9th ND in what used to be a landlocked naval district, is to direct its surprising number of naval activities. For example, one of the Commandant's most important functions is to administer the Naval Reserve program in the 13 states, with Naval Reservists drilling at 72 training centers.

• Great Lakes also provides advanced training in various *technical schools* for the different kinds of specialists needed in today's supersonic-electronic-nucleonic Navy. These schools provide instructions for machinists, gunners mates, electronics technicians, enginemen, electricians mates, dental technicians, boilermen, hospitalmen, opticalmen, fire control technicians and others—at last count there were 21 schools in the training command located there.

• The *Naval Hospital* at Great Lakes, besides being one of the major Navy facilities for the care of sick and injured personnel, is also a huge training center, providing indoctrination for corpsmen, nurses and interns. At one time during the fighting in Korea, USNH Great Lakes was treating 700 battle casualties.

• Two large Naval Supply activities have been set up in recent years at Great Lakes, adding to its functions. The *Naval Supply Depot* not only serves other naval centers throughout the midwest but also provides certain equipment for ships of the Fleet. A huge *Electronic Supply Office* controls the procurement and distribution of repair parts required for the maintenance of electronic equipment on shore stations and Navy ships.

• Important to every man in the Navy is the *Naval Examining Center* at the Lakes. Here are prepared and processed all the exams which you'll take, going up the ladder to chief. And CPOs who are specialists in each rating play a key role in what goes into those exams, to insure that

Canadian, British Warships Traveled the Seaway Too

Canadian ships participating in the opening of the St. Lawrence Seaway were the destroyer escorts HMCS *St. Croix*, HMCS *Athabaskan*, HMCS *Cayuga*, HMCS *Micmac*, HMCS *Crescent*, HMCS *Restigouche*, and the frigates HMCS *Fort Erie* and HMCS *Swansea*—all units of the Royal Canadian Navy's Atlantic Fleet.

Serving as escorts to the royal yacht *Britannia*, along with the U. S. Navy ships USS *Forrest Sherman* and USS *DuPont*, were HMCS *Gatineau* and HMCS *Kootenay*, and the British warship HMS *Ulster* rounds out the roster.

the questions are fair, and up-to-the-minute in your rate and rating.

• Then there's the *Fleet Home Town News Center.* Navy journalists —many of them previously trained right here at the Great Lakes Journalist School—collect and route news stories and photos of bluejackets and Waves from all parts of the country, and send them to their home town newspapers.

• Another sample of the all-Navy functions of the Great Lakes installation is the *Navy Medical Research Unit No. 4.* This unit has carried out research into the cause, cure and control of respiratory diseases—as part of the program to keep Navymen and their families as healthy as possible.

THE STORY OF Great Lakes goes back almost to the turn of the century. In 1904 a board was appointed by President Theodore Roosevelt to select a site for what was to be a centrally located training center. The present site was chosen from among 37 locations along the Great Lakes.

Even then the citizens of the midwest, although a thousand or more miles from the ocean, had a strong interest in the Fleet. The funds to purchase the property were raised by the Merchants' Club of Chicago and the land was presented to the government as a gift from the people of Chicago.

Great Lakes was commissioned on 1 Jul 1911, six years after construction had begun. At that time it consisted of 39 buildings and had a capacity of 1500 men.

During World War I, Great Lakes almost burst its seams to keep ahead of the training program. Its expansion gave it 775 buildings, with a capacity of almost 50,000 trainees. More than 125,000 Navymen received their first training in Great Lakes during the first World War.

But this was peanuts to what was to come. Between the war years Great Lakes business and population dropped off, then began to pick up after the national emergency proclaimed when Germany invaded Poland in 1939. With the attack on Pearl Harbor, overnight the expansion program got underway.

Working in shifts seven days a week, 13,000 civilian workers established records building new barracks, mess halls and training schools. In 1944 NTC Great Lakes' population reached its peak—more than

100,000. By the end of the war there were over 1000 buildings.

Things have tapered off at Great Lakes since then, but the capacity to put forth in a big push is still there. Today a visitor entering at the Main Gate of Great Lakes gets the first impression that he's on the campus of a large university. There are huge, red brick buildings, many of them covered with ivy, tree-lined streets, and smooth grass lawns. There's a tremendous square—actually a parade ground—and not far off are attractive living quarters.

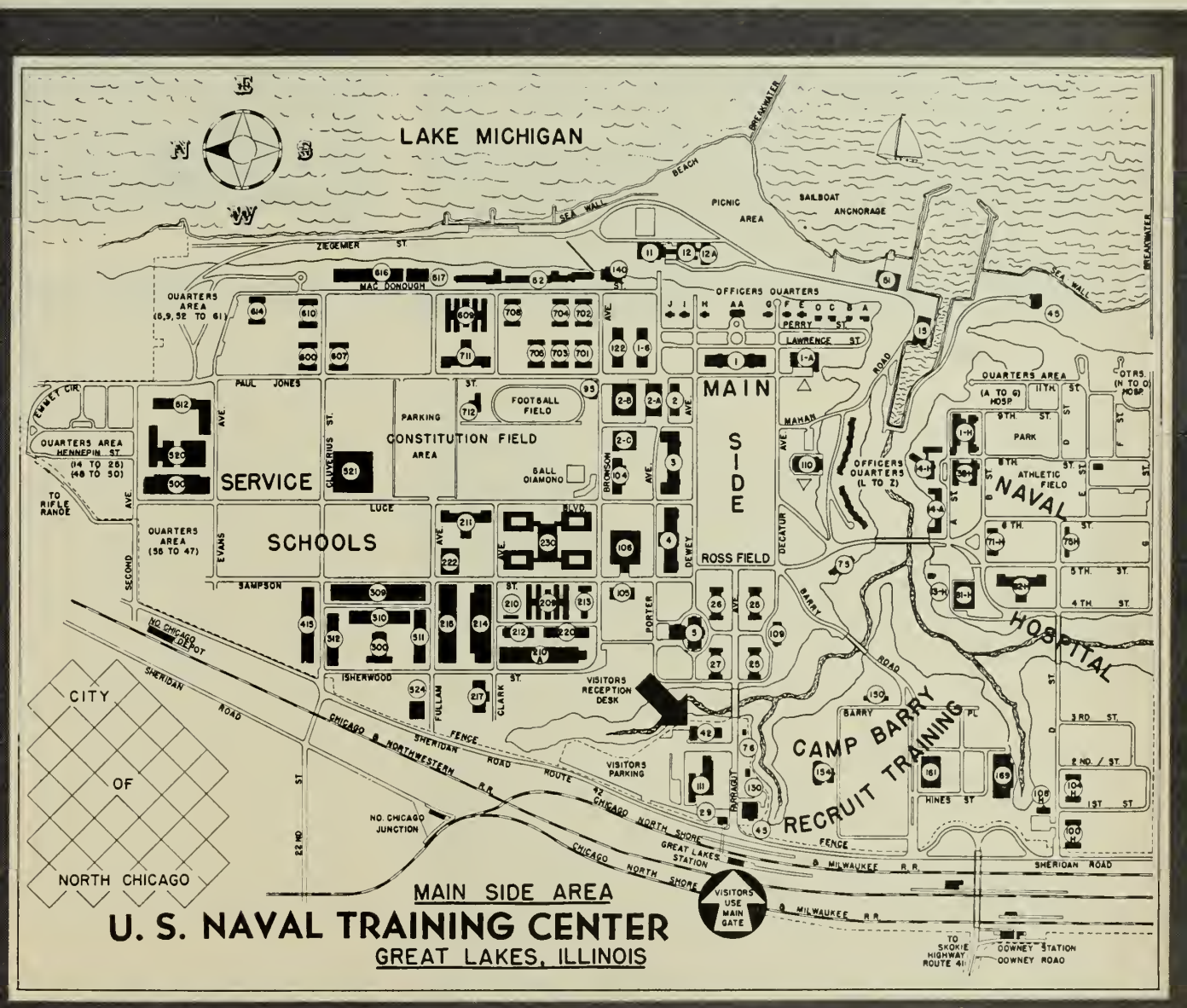
Other sections of the base lose the college atmosphere, and you feel as though you're back at some wartime overseas base—with huge utilitarian buildings, and barren grounds.

And in still other areas there's the look of a boom town. Old structures are being torn down, to be replaced by rows of attractive modern buildings — this is future housing for Navymen's families.

Great Lakes doesn't stand still. It keeps moving with the Navy and with the times—and the general opinion of the Navyman who's stationed there is—

"This is good duty."

THE map below covers only a small part of huge station at Great Lakes. Here are a few of the places it shows: 1—HQ Ninth Naval District; 2-B—IC School; 2-C—Commissary store; 3—NTC Administration; 4—Drill Hall; 5—Main Galley; 11—Power Plant; 12—Water Filter Plant; 13—Boathouse; 25-28—Barracks; 62—BOQ; 110—Ross Auditorium; 111—Navy Exchange; 150—RTC Administration; 161—RTC Receiving Unit; 169—Drill Hall; 209—EM Club; 210-A—Outgoing Unit; 211—Recreation; 214—BT School; 215—MM School, 217—Rifle Range; 300—Service School Administration; 309 — EN School; 310-311 — ET School; 312—JO and EM Schools; 413—EM School; 512—Electronic Maintenance School; 520 — ET School; 521—GM School; 610—Separations and Reenlistments; 616—FT, OM and IM Schools; 617—Gunnery Officers Ordnance School; 1-H—USNH Adm.; 82-H—Recreation, Theater; 100-H — Hospital Corps School; 108-H — Fire House.



GOOD CATCH—Frogmen converge on *Jupiter* nose cone (left), which was later hoisted aboard USS *Kiowa* (ATF 72).

Monkey Business Is Job of

IN THE SHIP'S LOG of the Fleet tug USS *Kiowa* (ATF-72) for 29 May 1959 are five entries.

They read:

"0330—Commenced maneuvering on various courses and using various speeds. Set the special project recovery detail."

"0418—Launched rubber boat with four swimmers."

"0503—Launched second rubber boat with four swimmers."

"0553—Nose cone on board."

"0556—Both rubber boats and swimmers on board."

That's the story of *Kiowa's* starring role in a history-making project—the recovery of the monkeys "Able" and "Baker" after their 1500-mile flight through space in the nose-cone of a *Jupiter* missile.

For *Kiowa* it was the high point in a 16-year record. Her history since her commissioning in June 1943 parallels the story of most of the Navy's small auxiliaries—no headlines, just a long list of solid contributions to the Navy's mission.

The first of those contributions from *Kiowa* came soon after completion of her shakedown cruise. Off Argentia, Newfoundland, she towed the targets which aided in making the brand-new battleship USS *Iowa* (BB 61) gunners highly proficient.

Summer of 1944 brought D-Day to the beaches of Normandy, and *Kiowa* was there, escorting a convoy of LSTs in to a beachhead. Later she went through heavily-mined waters to rescue the crew of the destroyer USS *Glennon* (DD 840), which had been damaged and run aground just off the invasion beach.

Returned to England, she then took on one of her more difficult towing jobs. *Kiowa* weighs only 1240 tons, but she latched on to the 16,000-ton ss *Sea Porpoise.* To complicate matters, *Sea Porpoise's* screw was locked in its shaft. *Kiowa* joined the slowest moving U. S.-bound convoy she could find, and literally dragged her big charge inch by inch through 28 days of tedium and boredom across the Atlantic.

Spring of 1945 saw *Kiowa* operating off Bermuda. Another tough towing operation popped up there. A short distance off Bermuda she took ss *Lone Jack* in tow.

Lone Jack's rudder had been jammed hard right, and instead of following a tow-line she rode mostly on *Kiowa's* starboard beam. The commanding officer got the bronze star for his seamanship.

The frozen north was the scene of another *Kiowa* adventure. In January 1946 she plowed nearly 1100 miles northeast of Argentia after a broken-down Danish merchantman. This was one time, though, when the tough little Fleet tug almost needed rescuing herself.

While still short of her goal, a ruptured boiler left her without heat next door to the Arctic Circle.

On top of that, an electrical fire in the main switchboard stopped all main engines. As a result, *Kiowa* was busied the next two days making sufficient repairs to return to port.

So it's gone in the years since. Thousands of jobs up and down the east coast—some exciting and exacting, most humdrum and routine—none calculated to make the history books. More of the same was about what *Kiowa's* crew expected when they arrived in the Caribbean the past April.

Early in May she received special

ABLE AND BAKER are back safe.

SPACE TRAVELER Baker (above) "reads" one of the many news stories about his exploit. He made the historic trip in life support capsule (below).

USS Kiowa

orders, however. At San Juan, Puerto Rico, she took aboard a very special group of passengers—four civilian scientists, four Army men and four Navy frogmen. On 28 May she made her rendezvous with two escort vessels, USS *Brough* (DE-148) and *Snowden* (DE-246).

The task group was patrolling off Antigua, West Indies, when lookouts spotted the nose cone falling toward its appointed destination. Guided by two Navy patrol planes, *Kiowa* maneuvered toward the bobbing nosecone, launching her frogmen just 25 minutes after the cone hit the water.

Lines were secured to the nosecone, it was slowly brought alongside, and gently lifted aboard. Minutes later the U. S. got a message—"Able, Baker perfect. No injuries or other difficulties." (Able's career was later cut short during an operation, but Baker is living out a full life as the Navy's first space monkey.)

Kiowa delivered her world-famous cargo at San Juan the following day, and a short time later headed quietly back to Norfolk and more towing jobs. —Jerry McConnell, JO1, USN.

LETTERS TO THE EDITOR

Another Dislocation Allowance

SIR: In August 1958 I was transferred from NAS Glynco, Brunswick, Ga., to duty under instruction at Radioman, Class B School, at Bainbridge, Md. At that time I received a dislocation allowance of $96.90.

In the spring of 1959 I was transferred to a ship based at Mare Island, Calif., so I moved my family to the West Coast.

Am I eligible to collect another dislocation allowance, even though this would be the second one within a single fiscal year?—L. J. G., RM2, USN.

• *Definitely.*

When you were ordered to Bainbridge the course of instruction was scheduled for 30 weeks. Thus, in accordance with Para. 1150-10b of Joint Travel Regulations, *Bainbridge became your permanent duty station and you were paid the allowance.*

Since that transfer was for a course of instruction, it does not fall within the one-in-a-fiscal-year limitation. Such situations are covered by Paragraph 9003, Item 9, of Joint Travel Regulations, *which provides, in part, that a dislocation allowance is not payable for more than one permanent change of station during a fiscal year—except that this limitation does not apply to members ordered to, from or between courses of instruction conducted at military installations.*—ED.

This section is open to unofficial communications from within the naval service on matters of general interest. However, it is not intended to conflict in any way with Navy Regulations regarding the forwarding of official mail through channels, nor is it to substitute for the policy of obtaining information from local commands in all possible instances. Do not send postage or return envelopes. Sign full name and address. Address letter to Editor, ALL HANDS, Room 1809, Bureau of Naval Personnel, Navy Dept., Washington 25, D. C.

Quarterdecks Ashore

SIR: I am attached to a Naval and Marine Corps Reserve Training Center. It is the policy at this training center to treat the building as if it were a ship in regard to rendering a salute to the colors coming aboard and leaving. I have never seen this at other training centers or Marine Corps posts and naval stations. Is this correct procedure?

Section 7 paragraph 2160 of *Navy Regulations* says, "The Commanding Officer of a ship shall establish the limits of the Quarterdeck and the restrictions as to its use. The Quarterdeck shall embrace so much of the main or other appropriate deck as may be necessary for the proper conduct of official and ceremonial functions."

I contend that this is no ship and there should therefore be no Quarterdeck.—R. E. S., AMSGT, USMC.

• *Our "cognizant sources" could locate no authoritative source on "Quarterdecks" on shore stations.*

While the procedure described in your letter is not generally used at shore stations, it does not appear to conflict with any regulations, and is presumed to be within the prerogative of the Commanding Officer of the Center.—ED.

Chief of Staff

SIR: Will you please tell me the difference between Chief of Staff and Chief Staff Officer? It is my understanding that a flag officer has a Chief of Staff and a unit commander below flag rank has a Chief Staff Officer. I have never seen it in black and white, however.

And another thing, is an absentee pennant flown when the Chief Staff Officer is away from his ship? According to DNC 27 and various other books, it specifically states Chief of Staff in regards to the second substitute. Can you clear this up?

When I was in destroyers, we did fly the second substitute, and I always thought it was right. Now I have been told that it is not. My common sense tells me it should be flown for the Chief Staff Officer, but I can't depend on that.—W. B. C., SMC, USN.

• *First of all, you're right in your differentiation of Chief of Staff and Chief Staff Officer. A flag officer does have a Chief of Staff, and a unit commander below flag rank has a Chief Staff Officer. The rank of the second in command has no bearing on the title.*

Here is how the system works. COMDESLANT, *for example, is a rear admiral, and has a Chief of Staff who is second in command.* COMDESRON *10 is a captain (referred to as commodore); he has a Chief Staff Officer.*

As for the absentee pennant, there is no authority to fly one for the Chief Staff Officer. Just as it states in DNC 27 *and* Navy Regulations, *it's the Chief of Staff (to an admiral) for whom you fly an absence indicator.*

If you want to look it up, check Articles 2162 and 2176 in Navy Regulations, and Article 151 of DNC 27. *These will give you the facts.*—ED.

Pending Detachment

SIR: I've been in on a rather heated discussion about the miscellaneous change entry "Change duty status to pending detachment" as required by Article D-102, NavPers 15, 642 (Rev. 1957).

I contend that the miscellaneous change should be made immediately upon the receipt of detachment orders for an officer on board in a duty status. Others say that the entry is not made until the relief reports on board.

In addition, it is their contention that an officer reporting on board as relief for an officer with detachment orders must be shown as Prospective-Billet. I believe that if the pending detachment entry is made the prospective relief can be gained with the primary duty listed even though the officer being relieved has not been detached on that day's diary.—M. V. K., PNC, USN.

• *Well, Chief, you win half your argument, anyway.*

In answer to the first part of your query— your contention is not correct. The miscellaneous change entry is re-

CO's Recommendation

SIR: The page 13 service record entry concerning recommendation for advancement previously specified the month and year in which a man was to compete in the service-wide exam.

Now, the page 13 entry reads, "(Date) recommended for advancement. Eligible to participate in the servicewide competitive examinations for (rate)."

Does this mean that an individual no longer has to be recommended each time he competes for the same rate? In other words, is the initial recommendation sufficient unless withdrawn by the commanding officer?—J. W. F., YN2, USN.

• *There's been no change. The recommendation for advancement applies to one examining period only. The CO's recommendation is still the first and most important factor in determining eligibility for advancement, and must be submitted each time.*

The service record entry need not necessarily be repeated since the NavPers 624, signed by the CO or his authorized representative, certifies that the individual is recommended for advancement.—ED.

quired for an officer being relieved when the relieving officer has reported on board.

As for the second part of your argument, you're right as rain. The pending detachment entry is made in the personal accounting system to avoid reflecting more than one officer in a duty status against one billet in an allowance.—ED.

Four 'E' Tender

SIR: From the tone of the story about USS *Dixie* (AD 14), on page 35 of your April issue, it sounds as if *Dixie* is the only tender servicing CRUDESPAC ships in the Western Pacific.

USS *Bryce Canyon* (AD 36)—a four (4) "E" tender—has been in WESTPAC since February 1959, and we think she does a fine job, equaling or surpassing most other ADs.

This is not a rash statement, for her record backs it up. Over the past four years she has won the Battle Efficiency Award four times in a row as top ship of her class. In October 1958, when *Dixie* did a five-day rudder job on a DDR, we performed one on USS *Brush* (DD 745) in just five days. However, we don't have to go back that far to come up with "tough jobs tackled."

Not so long ago our Hull Repair divers changed propellers on USS *James E. Kyes* (DD 787) to save her the time and expense that going into drydock would have meant. So far as we know this was the first time a destroyer tender had undertaken such a job on the West Coast. In January 1959 we accomplished what we think was the first destroyer-helicopter conversion job on the West Coast. This job was mostly "played by ear" by our ingenious shipfitters, and many of their methods have since been adopted by other ADs for converting other destroyers to receive 'copters.

Bryce Canyon is much smaller than *Dixie*. We have only 33 shops, but in one typical 10-day availability period with DesDiv 31 we satisfactorily completed 600 job orders. This can be compared with *Dixie's* 100 job orders for 75 shops, during a two-week availability.

We offer all the services mentioned in the story about *Dixie*. In addition, our radiomen and signalmen provide radio and visual guard services to ease the load for sea-weary destroyer communications personnel. Our Engineering Department contributes steam and electrical power. During the first nine years *Bryce Canyon* was in commission she supplied over 15 million kilowatt-hours of electricity to ships alongside. That's enough power to supply an average home for 5000 years.

To date *Bryce Canyon* has handled over 40,000 job orders, accomplishing repairs on more than 2500 ships.

CRACK SHIP—Light cruiser *USS Roanoke* (CL 145) has earned her share of E's and then some while serving with ComCruDiv Five out of Long Beach.

Although the ships we've serviced are spreading the good word about us, we still thought you should know that *Dixie* isn't the only floating service station in CRUDESPAC.—J.S.L., LTJG.

• *Spreading the word by mouth takes time. It's much faster, and more complete, when someone takes the time to sit down and write up an account. So thanks, and three cheers for* Bryce Canyon.—ED.

Which Way to the Sick Bay?

SIR: I greatly enjoyed your fine article on DEs and DERs in the April edition. However, I must take issue with the statement that the drawing in your centerspread showed a typical DE.

Where is the sickbay?

I will not accept the answer that it was in the portion of the ship that was cut off (which is what you told someone else when the sickbay turned up missing in a drawing of a cruiser in your July 1958 issue).

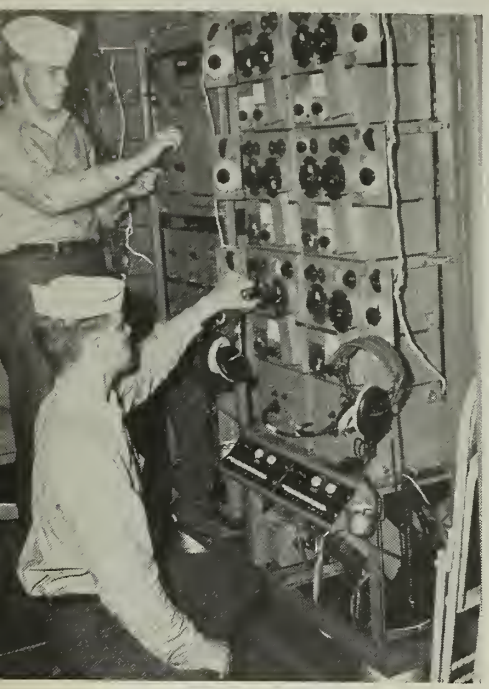
On the other hand, I suppose your DE is typical in that the sickbay is so small it cannot be seen with the naked eye.—C. F. Daniel, HMC, USN.

• *As you've served in a DE, you're probably aware that the ship in our centerspread is a composite of several different classes. In such a drawing it is impossible to indicate all spaces, and the sickbay isn't the only area that was left out.*

The pharmacy or hospital space on most DEs is on the starboard side of the ship, so regardless of whether or not you'll accept our answer, the truth is that the portion of the ship containing the sickbay has been cut off.

We know this sounds like the same answer we gave the last time we were accused of losing a sickbay (November 1958 issue, p. 31). But, as we said at that time—no matter how you slice it, that's the way the ball bounces.—ED.

THREE OF A KIND—Oilers *USS Hassayampa* (AO 145), *USS Kawishiwi* (AO 146) and *USS Taluga* (AO 62) all operate in Pacific, rarely get together.



LIKE REAL—Tradevmen work device that relays problem to Air Early Warning Combat Information Center.

SIR: In past issues of ALL HANDS I have seen quite a bit about USS *Nautilus*, SS(N) 571; *Skate*, SS(N) 578; and *Seawolf*, SS(N) 575—but you haven't once mentioned their tender, USS *Fulton* (AS 11).

Indirectly, the men of *Fulton* have played an important part in the exploits of these record-breaking subs, so how about a word for our tender? - -Richard R. Gonzales, RMSN, USN.

• *One well-deserved plug coming up.*

USS Fulton *(AS 11) is the second submarine tender named for the world-famous inventor, Robert Fulton.*

The first—AS 1—was completed in December 1914. During World War I she handled the reconditioning and outfitting of Submarine Division Six. She remained a sub tender until 1930, when she put into the Philadelphia Navy Yard for conversion, after which she served as a gunboat (PG 49) and survey ship until May 1934, when she was decommissioned. She was sold for scrap a year later.

The present Fulton *(AS 11) was authorized by an Act of Congress dated 30 Jul 1937. She was built at the Navy Yard, Mare Island, Calif., and launched on 27 Dec 1940. Her sponsor was Mrs. Alice Crary Sutcliffe (a great-granddaughter of Robert Fulton), who had also been the sponsor of AS 1 back in 1914. The new* Fulton *was commissioned on 12 Sep 1941.*

After her trial runs, Fulton *headed for the Destroyer Base, San Diego, Calif., arriving there on 25 November. She started her shakedown cruise on 1 December, and was on her way to Panama when Pearl Harbor was attacked.*

From 9 to 17 December, Fulton *remained in Panama. Then, she stood out for the Gulf of Fonseca, on the Pacific coast of Nicaragua, where she established a seaplane base in just 23 days, in spite of having to build and improvise much of the equipment. Returning to Panama on 14 Jan 1942, she was dispatched to the Galapagos Islands to help set up another seaplane base. This one was completed in five days, and the tender returned to San Diego on 9 February.*

On 8 March the ship departed for Pearl Harbor. She arrived at the Submarine Base there on 15 March, and soon set to work on her first submarine refit—on USS Drum *(SS 228). Her work at Pearl was interrupted on 3 June, when she set out to rescue survivors of* USS Yorktown *(CV 10). The carrier had been lost in the Battle of Midway, which was still in progress. The tender returned to Pearl on 8 June, and worked there until 12 July, when she left for Midway to establish a submarine base there. She stayed on to refit subs at Midway until 17 October, when she got underway for a drydock period back at Pearl.*

Fulton *didn't get much of a rest. She reached Pearl Harbor on 21 October, and on the 26th departed for Brisbane, Australia. Arriving on 11 November, she became the flagship of Commander Task Force 72 (COMO J. Fife) the same day. At Brisbane,* Fulton *established another sub base and a submarine rest camp. She also took care of 67 submarine refits and 13 voyage repairs, and did repair and refit work on many other types of ships before leaving Brisbane on 24 Oct 1943 for Milne Bay, New Guinea.*

The tender worked at Milne Bay from 29 Oct 1943 until 17 Mar 1944. During that time, repairs on ships other than submarines often made up as much as 80 per cent of her work load. She also built a complete rest camp for submariners, even installing a water system and manufacturing much of the camp equipment.

From Milne Bay, Fulton *returned to Pearl Harbor on 27 Mar 1944. She left on 18 April, and on the 24th, pulled into Mare Island for overhaul. When that was completed, she sailed for Pearl again, arriving there on 13 June. After about a month's work at Pearl, she departed for Midway, where she worked from 18 July to 8 September.*

On 17 September, Fulton *pulled into Saipan, where she took care of both submarines and surface craft for the next seven months. She left on 23 Apr 1945, and on 7 May, pulled into Pearl, following a trip which had included a brief stopover at Guam. After about a*

TENDER—*USS Fulton* (AS 11) has power house in *USS Nautilus*, SS(N) 571, *Skate*, SS(N) 578, *Seawolf*, SS(N) 575.

Das Iss Oberice Boaten, Mitt Uppenjumpen Whirlenburden Yet

SIR: The icebreaker USS *Staten Island* (AGB 5) is currently operating as part of Task Force 43 in Operation Deep Freeze IV. At this writing, we are about midway in the operation, having visited McMurdo Sound, Little America V and Hallett Station.

Staten Island has several memorable accomplishments to her credit and during this operation she has lived by her motto, "If it can be done, we can do it." She single-handedly broke and cleared the ice from a 10-mile long channel in McMurdo Sound, a feat not considered possible for a *Wind*-Class breaker. She has served as a cargo ship, oiler, transport and aircraft carrier as well as an icebreaker during this operation. We who serve in her are proud of her accomplishments.

Even while adding to an enviable record, we have our small troubles. Sometimes, when they are over, they become very amusing.

Among the civilian scientists and news correspondents we have with us a prominent Swiss photographer, Mr. Emil Schulthess. Mr. Schulthess, impressed with the ship, desired to record an interview discussing icebreaking—in German—with some member of the crew. Alas, checking everyone with German names or of German descent, we found that no one could speak German.

The best we could muster up is the following story, "USS *Staten Island*—Ice Busten Boaten," written by LTJG J. L. Reifschneider, USN.

Der iss unterseaboaten like U-boaten, oberseaboaten like *Bismarck* or *Scharnhorst* but *Staten Island* ist obericeboaten. Nein, *Nautilus* ist unterice boaten.

Vas ist oberice boaten?

Oberice boaten ist icebusten boaten. Mit der soot hausen black smoke belchen, Herr Machinest shouten "Der engine oberloaden," das *Staten Island* runnen like blitzen at das ice. Kaptain armswingen und upshouten, "Screw-busten in der ice ist verboten" as upskooten on der iceflowen mit noise gebangen like donner ist der *Staten Island!* Mit bowbammen und ice gesplitten ist goen 20 feet. Ja.

Ach, dumpkopf, gestuck! Shipleanen mit der heelen tanks den! Comes Herr Electriker snorten und fumen, "Nein, Nein! Oberloaden das kilowatt machine."

Das trimmen tanks flooden mit oil on poopen deck vile der Grosvater Bos'n field day holden! "Vas iss sloes?" Cryen Grosvater Bos'n! "Oil on der deck planken! Schwinehund schnipes!"

Herr OOD ben maken 130 backvards turns mit screw, und unstuck der boaten. Vas ist? "Ja, busten der blowen air to der engine" screamen Herr Machinest und stompen to GSK to see oberlieutenant storekeeper mit bum numbers.

Mit stack blowen und book looken und grunten und groanen der spare part don't vork! Full mit saltwater from geflooden.

Meanvile, Herr Oceanographer ist oceanstation droppen vile der Navigaten Offizier ben taken sight on star vile maken station droppen und ist losten posit.

To finden posit, go icehunten in ear gesplitten, winderblowen, upenjumpen whirlenburden so smoken ist verboten aft of frame 105 vile fuelen der luftwaffe. Ach, uppenjumpen whirlenburden ven not seal chasen und penguin hunten, ben alvays finden ice to gesplitten. Very-goot. Ja, und sleepen by der plane cox'ns.

Das ist oberice boaten *Staten Island.*
—P. Lewis, Jr., CDR, USNR.

• *Faith, now. And there must be a bit o' truth in what you're sayin'.*

By the way of explanation, CDR Lewis tells us that AGBs are equipped with large heeling tanks, high in the hull, connected athwartships with high volume pumps, and trim tanks fore and aft also connected with high volume pumps. The purpose of these tanks and pumps is to free the ship from ice by heeling or trimming or both as required. However, use of these pumps demands large amounts of electricity and sometimes results in overloaded generators. When not actually in ice, these tanks are used to carry diesel oil and a small quantity always remains in the tanks after they are discharged. Use of the tanks for heeling or trimming requires that they overflow on the plank decks, much to the consternation of the deck force. The spare part discussed was a spare main engine supercharger blower that was completely out of balance. After again removing it from the engine (no small task) it was found that the lobes were partially full of saltwater.

Now, try reading the translation again.—ED.

month at Pearl, she was off for Guam again on 9 June. Arriving on the 20th, she remained at Guam until 1 September, when she headed stateside, via Pearl Harbor. She reached Seattle, Wash., on 22 September.

In December 1945 Fulton *was assigned to Joint Task Force One for the Bikini atom bomb tests. She departed San Diego in January 1946, put in at Pearl Harbor to service subs there for several months, then moved on to Bikini in April to work on assorted submarines and surface craft assigned to Joint Task Force One. Leaving Bikini in September, she steamed for Vallejo, Calif., via Pearl Harbor, to join the Pacific Reserve Fleet. She reached Vallejo in October and was decommissioned 3 Apr 1947.*

After almost five years on the sidelines, Fulton *was recommissioned on 10 Apr 1951. She left the West Coast on 3 May and—after stops at Balboa, C. Z., and Mayaguez, Puerto Rico,—she reached New London, Conn., on 26 June. The same day, Commander Submarine Squadron Ten and Staff came aboard. The squadron was reactivated on 2 Jul 1951, and except for two months as a relief tender at Norfolk, Va.,* Fulton *took care of* SUBRON *10 for the rest of the year.*

In fact, for most of the time since 1951, Fulton *has been tending* SUBRON *10 at New London. However, she's also managed to do some traveling.*

In the spring of 1952 she was overhauled at the Philadelphia Naval Shipyard and she paid a brief visit to Norfolk. That fall, she put in 12 days as communication ship at Argentia, Newfoundland, and visited Halifax, Nova Scotia. The next year participation in Operation Springboard 1953 took her to St. Thomas, Virgin Islands; and San Juan, Puerto Rico, in February-March. And, that September and October, she served as Headquarters Unit for Submarine Squadron Eight during Atlantic Fleet exercises, an assignment which included a trip to Rekjavik, Iceland.

Fulton's *activities in 1954 included a visit to New York City in February, service as a relief tender at Norfolk from July to September and an overhaul at the Boston Naval Shipyard which lasted from October to December. The year 1955 was another busy one. In January and February the ship underwent refresher training which took her to Newport, R. I.; Puerto Rico; and the Dominican Republic. That fall, she paid another brief visit to Halifax.*

The following year, in connection with Operation Springboard 1956, Fulton *made a Caribbean trip in January and February which again included stops in Puerto Rico and the Virgin Islands. In April and May she held independent ship exercises in Narragansett Bay and off-loaded ammunition at Newport. June saw her heading for Bermuda, where she assumed duties as Flagship Unit for Blue and Purple Forces of Operation Hourglass, in which NATO submarine, surface and air units participated. She got back to New London early in July, and later the same month, during Operation Hideout, took part in exercises testing the Atlantic Fleet Evacuation Plan. In October, she again held independent*

ship exercises in Narragansett Bay and put into Newport.

In the first half of 1957, the Narragansett Bay operating area and Newport were about the extent of Fulton's *travels, but in the last half of the year she racked up considerable mileage. On 1 September, as a unit of Task Force 23, the tender left New London for the Firth of Clyde, Scotland, to participate in* NATOFLEX. *She stayed at Rothesay, Scotland, from 12 to 23 September, and during that time a* USS Fulton *plaque was placed at Mill O'Beith, Ayrshire, Scotland — Robert Fulton's birthplace. From 25 September to 23 October the ship was moored off Portland, England, where she rendered extensive logistic support to 23 submarines which had participated in NATO exercises. (In both Rothesay and Portland she entertained visitors as part of the President's people-to-people program.) She returned to New London in October and moved to Boston the following month for overhaul.*

After her overhaul and one day of sea trials, Fulton *loaded ammunition at Hingham, Mass., and returned to New London in March 1958. Later the same month she ran the degaussing range at Newport and made another trip to the Virgin Islands.*

Fulton *had a real red-letter day on 1 Apr 1958, for that was when* USS Nautilus, Skate *and* Seawolf *were assigned to* SUBRON *10 and* Fulton *became the first ship assigned the mission and responsibility of supporting nuclear-powered ships. As if to celebrate,* Fulton *went on to win the "E" for Fiscal Year 1959.*

In June, Fulton *was underway for more independent ship exercises in Narragansett Bay. In August, she visited New York City to participate in the homecoming celebration for* Nautilus *after her under-the-Pole voyage, and in November, she made an operational visit to Bermuda.*

This year, as usual, Fulton *will be keeping mighty busy at New London or anywhere else she is needed.*—ED.

Extension of Retirement Date

SIR: I am a CWO-4 who enlisted in the Navy in November 1931. Before that I was in the Army for a year, with which I am now credited for pay purposes.

My questions are:

Does that year in the Army count toward the 30 years of service after which I will be retired?

Is there any way I can elect to retire on 1 July of the year following my completion of 30 years' service?—L.I.P., CWO-4, USN.

• *As you probably know, there is no statutory provision for the involuntary retirement of a temporary warrant officer on completion of 30 years' service. However, administrative procedures which parallel the law pertaining to permanent warrants have been established for temporary WOs.*

The law concerning permanent WOs (Title 10, U. S. Code, Section 1305) states that permanent warrant officers shall be retired 60 days after the completion of 30 years of active service. Since that "active service" includes active duty and active duty for training in all military services, and field training in the National Guard, your year in the Army is counted.

Therefore, you will complete your 30 years of active service in November 1960. When the time comes, you will be notified that you may retire voluntarily on 1 Jan 1961, or revert to your permanent enlisted status on 31 Dec 1960.

Unfortunately, your chances on the extension until 1 July don't look too good. Although you may request an extension of retirement date, such extensions are not normally granted.—ED.

MORE FUN—B. Southwood, CN, has good time riding one-wheeled cycle he built with a friend on Midway.

NO HANDS—H. Hockett, CN, wheels his home-made unicycle down street on Midway. Solid wheels are strong.

Choice Duty—500 Miles Away

SIR: Could you please explain to me how this Seavey-Shorvey works? I have been trying to figure it out for myself but can't. I have just received my orders to shore duty. After all the promises made in the pamphlet on Seavey-Shorvey, I just wonder if the only way to get what you ask for is to know someone in the Bureau.

Your booklet also says that men with 17 years would be given special consideration. When my card went in I had over 16 years, and when I received my orders I had over 17 years. It took a year for me to get orders, and then I end up in my present location.

I was assigned to COMSERVLANT for assignments to Fleet shore duty, so there was no possible way for me to get what I asked for. However, I guess I was lucky to get within 500 miles of the area that I requested. There are billets for 132 EN1s in the Fifth Naval District. Maybe I should have asked for duty at this exact spot and then I would have gotten somewhere else. It seems they give you just the opposite of what you ask for.

I have never had shore duty in my 17 years and I wind up in a location I didn't want. I believe I would have been just as well off if I had left the card blank, because the way it looks to me, there was no consideration given to any of my choices.—R. C. L., EN1, USN.

• *Let's see if we can set you straight on your Seavey assignment to shore duty.*

In the first place, be assured that "knowing someone in the Bureau" would help you not at all. When your data card was received at the Bureau, listed thereon were your choices of shore duty. You had indicated the Fifth Naval District as your first area preference. Within 5ND you listed 3 choices of duty stations, as follows: (1) Lexington, Ky.; (2) Louisville, Ky.; (3) Huntingtou, W. Va. You also listed Memphis, Tenn., in 6ND

Individual local preferences within a naval district are for the information of the Naval District Commandant or Fleet Commander. The Bureau's goal is to assign a man to the naval district of his choice. In some instances it does happen that there is a vacancy at the exact location which is requested, but this is a rarity.

Your first choice was the Fifth Naval

District, to which you were assigned. Most of the local preferences which you indicated were so far from large naval activities that the chances of your being assigned to one of them were not very probable. You ended up assigned to the Reserve Fleet, Norfolk.

There did not happen to be a vacancy existing in your rate at any of your duty choices within the Fifth Naval District at the time you became available to ComFive for assignment, but at least you are stationed in the general area you preferred. If you had left your card blank the Bureau would have had to assume that you had no preference, and you then could have been assigned anywhere—in any district.

As for special consideration for more than 17 years' service—an opening for your rate must exist at a particular activity before such consideration can be given. For example, if an EN1 billet was open at a naval activity in or near Lexington, Ky., and both you and another EN1 with only 12 years had indicated that activity as your first choice, you, with 17 years' service, would get the assignment. It must certainly be plain to you, however, that ComFive cannot assign you to a station in excess of allowance, or to one where no billet in your rate exists, based solely on the fact that you have in excess of 17 years' service. Hope this has cleared up a few points for you.—ED.

Constructive Service

SIR: What little information I have been able to obtain about constructive service must have confused me.

I have just received my date from the Bureau for transfer to the Fleet Reserve: service for transfer, 19 years, six months and 10 days; service for pay 18 years, six months and 13 days.

It appears that I have been misinformed and that constructive time counts only for service for transfer and not for pay purposes.

What retainer pay will I receive as an E-7?—R.J.A., ADC, USN.

• *Constructive service does count* ONLY *for time in service, not for pay purposes. Here is the way constructive service will be used in figuring your retainer pay:*

Multiply 2½ times 20 (service for transfer, including constructive time), times basic pay for over 18 (day-for-day service) years. With a basic pay of $340, this works out to $170 a month for you.—ED.

Ships Reunions

News of reunions of ships and organizations will be carried in this column from time to time. In planning a reunion, best results will be obtained by notifying the Editor, ALL HANDS Magazine, Room 1809, Bureau of Naval Personnel, Navy Department, Washington 25, D. C., four months in advance.

USS *Santa Fe* (CL 60)—The thirteenth annual reunion will be held at the Hotel Piccadilly, New York, N. Y., on 10 October. For more details, write to Frederick C. Jaissle, 18 Cedar St., Hudson, Mass.

Naval Reserve Association—The annual meeting is scheduled for 8, 9 and 10 October at the Biltmore Hotel, Atlanta, Ga. You may obtain additional information from CDR M. E. Cambrell, Jr., USNR, 703 Densley Dr., Decatur, Ga.

USS *Blue* (DD 744)—A reunion for shipmates who served from 1950 through 1955 is tentatively scheduled for August 1960 in St. Louis or Denver. For details, write F. D. Collins, 430 South 6th East, Missoula, Mont.

USS *PE 48* (*Eagle*-type)—All who served in this ship during World War II and who are interested in holding a reunion in the New York City area are invited to write to Burt Jones, 27 Walker St., Staten Island 2, N. Y.

USS *Kaskaskia* (AO 27)—All who served on board during World War II and who are interested in holding a reunion in the San Diego or Los Angeles area may write to Joe Williams, Route 3, Box 732, Escondido, Calif.

VR-2 Alameda, Calif.—All enlisted men who served with VR-2 at NAS Alameda and Treasure Island, Calif., in 1945 and who are interested in holding a reunion with time and place to be decided may write to Paul Portelli, 1046 W. Hillsdale Blvd., San Mateo, Calif.

Naval Security, N. Y.-N. J. Area—Former Naval Security men of the New York-New Jersey area who are interested in a reunion may write to LTJG Joseph J. Trachta, 83 Crowell Ave., Staten Island 14, N. Y.

Early Reenlistment

SIR: Is it possible to cancel an extension for the purpose of reenlisting more than three months early?

I began a one-year extension on 2 Jul 1959, with expiration of enlistment 1 Jul 1960. Could I reenlist early, say in September 1959.—J.W.H., EN3, USN.

• *Yes. Par. 3 of BuPers Instr. 1133.-4A says, in part: "Commanding officers are authorized to discharge up to one year in advance of normal expiration of enlistment date, or normal expiration of enlistment date as extended, those Regular Navy personnel who desire early discharge for the purpose of immediate reenlistment."*—ED.

Navy Gun Slingers Shoot It Out

ALL IS QUIET on the Western Front. That is, at Camp Elliott—the San Diego "battlefield"—where the Navy's top marksmen shot it out during the annual four-day U.S. Navy Rifle and Pistol Championship Matches.

When the smoke had cleared, PacFlt's crack-shot pistoleers and riflemen had captured the Navy's top individual and team pistol and rifle laurels.

Donald J. Weldon, FT3, USN, of the radar picket destroyer USS *Frank Knox* (DDR-742), emerged as the Navy's new individual pistol champ. He fired a 566 out of a possible 600, topping a field of 86 shooters who compiled the highest over-all scores in the history of the U.S. Navy championship matches.

For the second consecutive year, David E. Myrick, HM1, USN, from the San Diego-based submarine tender USS *Sperry* (AS-12), won the U.S. Navy's individual Rifle and Pistol Aggregate Championship. He fired a 930 out of a possible 1000 to win over 39 competitors. In the individual pistol meet Myrick placed second only to Weldon, with a score of 562.

Art LeTourneau, BMC, USN, assigned to the Headquarters of the Eleventh Naval District, finished first in the individual rifle match with a score of 380 out of a possible 400. He was runner-up to Myrick in the rifle/pistol aggregate match with a 924.

These three Navy Rifle and Pistol Champs were awarded plaques from the Chief of Naval Personnel in recognition of their outstanding accomplishments.

PacFlt Pistol Record

Gasper P. DeFino, TM1, USN, of the Navy's Small Arms Training Unit at NTC San Diego, riddled his target for a 569 out of a possible 600 to establish a new all-time individual pistol mark for the Pacific Fleet Rifle and Pistol Matches.

DeFino's record-breaking score was three points higher than that fired by the winner of this year's All-Navy meet. If anyone can match this, let us know.

In the team matches, COMCRUDESPAC's foursome of distinguished aces fired their way to the U.S. Navy Pistol Championship with a high of 1084 x 1200, while a six-man team from SUBFLOT ONE, representing COMSUBPAC, captured the U.S. Navy Rifle Team Match. Not satisfied with this distinction, the SUBPAC squad added two additional PACFLT sharpshooters to its roster and then went on to win the U.S. Navy Combat Rifle Team Match.

COMCRUDESPAC's championship pistol team consisted of the All-Navy Champ—FT3 Weldon—who was high scorer with 285; G. D. Casey, GMC, USN, 276; A. G. Dean, RMC, USN, 266; and H. C. Haller, MMC, USN, with a 257. LT J. H. McAuliffe, USN, from the heavy cruiser USS *Rochester* (CA 124), was team captain.

Trailing the champs by 21 points to finish second in the pistol matches was the Com 11 Gold Squad with 1063. The Basic Air Training Command from Pensacola placed third with 1035, while Com 9 placed fourth with 1005.

Finalists in the individual pistol

TEAM WORK—Top Navy rifle team was from SubPac: *Left to rt:* (Standing) D. E. Myrick, HM1; R. N. Turnipseed, SH1; C. C. Kozlowski, TMC; LT C. E. Tate; and LT R. J. Anderson. (Kneeling) J. L. Foster, DC3; WO W. Geil; and CDR Geismann. Number one Navy Pistol team came from CruDesPac: LT J. H. MacAuliffe, A. G. Dean, RMC; H. C. Haller, MMC; G. D. Casey, GMC; (Front) D. G. Weldson, FT3, and F. R. Steputis, SOG 2.

matches, other than Weldon and runner-up Myrick, included: B. S. Adams, ADC, USN, of VF-101, who placed third with 556 out of a possible 600; I. N. McKee, GMC, USN, from Com 15, and G. D. Casey, GMC, USN, from the radar picket destroyer *Knox*, tied for fourth place with 551; and J. E. Barcus, AKC, USN, from NAS Miramar, was fifth with 550.

In the rifle matches, the SUBPAC squad topped the two Atlantic Fleet entries and the defending champs from Com 11 to win the U.S. Navy Rifle Team Match with an aggregate score of 1389 out of a possible 1500. Of this score, 490 points were registered by hitting 98 bull's-eyes.

Members of the victorious SUBPAC team included: Team captain, WO W. Geil, USN, (USS *Sperry* AS-12), 224; LT C. E. Tate, USN, (Staff, COMSUBDIV 51), 226; LT R. J. Anderson, USN, (XO, USS *Segundo* SS-398), 234; C. C. Kozlowski, TMC, USN, (*Sperry*), 233; D. E. Myrick, HM1, USN, (*Sperry*), 234; and R. N. Turnipseed, SH1, USN, (*Sperry*), 237.

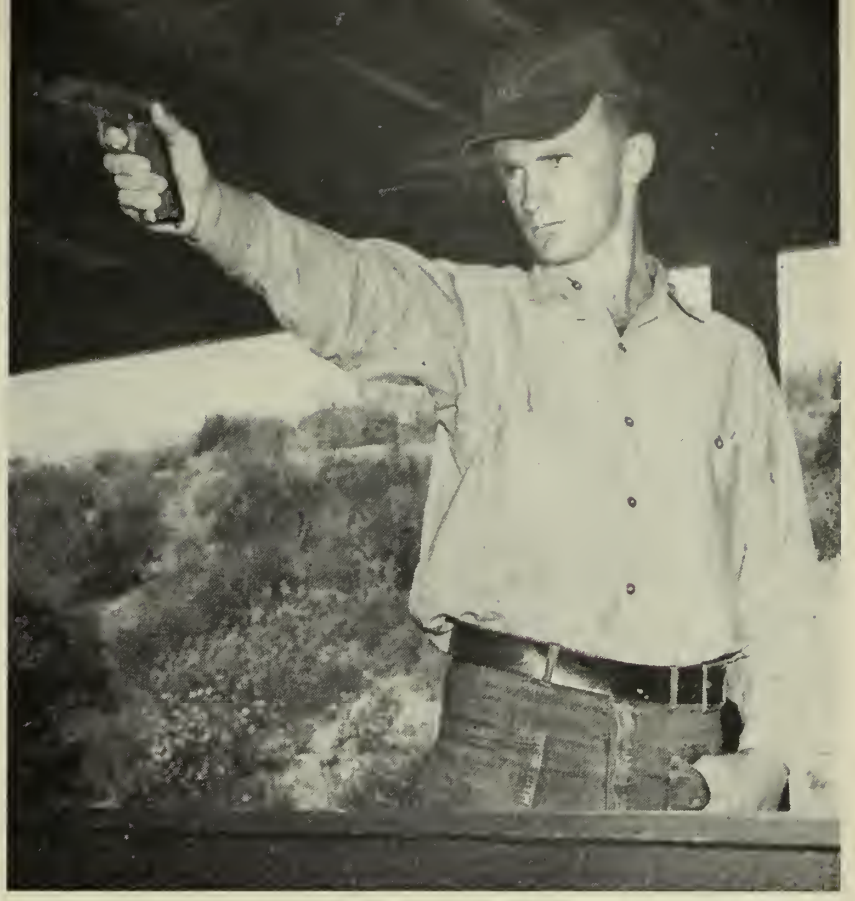
Runners-up to SUBPAC were the CNAVANTRA team from Corpus Christi, with 1353; PRNC was third with 1338, and the Com 11 Gold Team finished fourth with 1326.

After winning the All-Navy Crown, the SUBPAC marksmen added A. Sasules, AD2, USN, from VA-23, and T. R. Moody, MMC, USN, from SATU, NTC San Diego, to their roster and went on to conquer the U.S. Navy Combat Rifle Team Match by trouncing the Atlantic Fleet team by a score of 790 to 653.

Prize for this competition was the Chief of Naval Operations Infantry Trophy. Referred to as "Burke's Bonnet," this prized trophy consists of a bronzed four-starred helmet that was actually used by CNO, ADM Arleigh A. Burke, USN, during World War II. This trophy was donated by the admiral last year as an indication of his interests in small-arms training.

The U.S. Navy Infantry Match Course is the same course of fire used at the infantry trophy competition in the National Trophy Matches at Camp Perry, Ohio. Last year the Navy entered a team in the infantry trophy matches at Camp Perry for the first time since the early 1930s, and they placed in the top 10 per cent of 100 teams entered.

The U.S. Navy Combat Rifle



EYES HAVE IT—Top pistol champ D. J. Weldson, takes aim. *Below: D. E.* Myrick shows trophy for top individual rifle and pistol aggregate score.

Wave Sharpshooter Makes Quite a Hit

During the Atlantic Fleet Rifle and Pistol Championships at the Fleet Air Defense Training Center, Dam Neck, Va., LT Nancy J. Ellifrit, (w) USN, had the distinction of being the only woman among the 170 competitors. (And from all reports, she made a hit—on the target, of course.)

Although this was the first time that she had competed in the Atlantic tournament, she is by no means a novice to rifle and pistol matches.

She has competed in the Nationals at Camp Perry for the past five years.

LT Ellifrit became interested in shooting small-arms at OCS.

Among the titles that the Navy's "Annie Oakley" has won are the New Hampshire State Gallery Championships earlier this year, the Women's Championship for the state of Virginia, and the Women's Regional title at Harrisburg, Pa.

LT Ellifrit is assigned to the Naval Shipyard, Portsmouth, N.H.

Team Match was fired in four stages —at 600, 500, 300 and 200 yards. The target is a man-size silhouette at the 500 and 600 yard stages and it is increased to approximately the size of a man's upper chest at the 200 and 300 yard stages. Only hits on the target are scored.

The PACFLT sharpshooters led all the way during this "rattle-gun" match and the dust really flew as they fired away in each of the four stages. The rattlesnakes, which are abundant in the vicinity of the Camp Elliott Ranges, didn't dare show their heads. (You can be assured of this as many of the competing marksmen were looking for them almost as keenly as they were eyeing the bullseye.)

In spite of the dust and rattlesnakes, the over-all scores in this year's All-Navy meet were higher than those of last year.

In the individual rifle competition, the top finalists not mentioned earlier included: LT D. N. Strashein, USN, (NAAS Kingsville, Tex.), who placed second with 379; D. D. Dyck, TE/RM3, USN, (COMSERVPAC) was third with 378; and C. C. Kozlowski. TMC, USN, (*Sperry*) and LTJG C. E. Quesnoy Jr., USN, (NAVSUPCEN Oakland) were tied for fourth place with a score of 376.

The top five finalists in both the rifle and pistol competition were presented with individual trophies. In addition, Model M-70 rifles were presented to the first place individual winners of the U.S. Pacific Fleet, U.S. Atlantic Fleet, U.S. Navy Rifle and Pistol Matches, and the U.S. Navy Rifle and Pistol aggregate winner.

The SUBPAC Rifle Champs and the CRUDESPAC Pistol Champs were presented perpetual team trophies for their efforts while the SUBPAC team was also presented the CNO Combat Rifle Team Trophy (Burke's Bonnet) mentioned earlier.

All competitors in the U.S. Navy Rifle and Pistol Match were issued specially designed cuff links and brassards.

CDR B. L. Parke, USN, Assistant to the Chief of Naval Personnel for Small Arms Competition, selected the top finalists in the All-Navy Meet to represent the U.S. Navy at the National Rifle and Pistol Matches at Camp Perry, Ohio, last month.

Ranking of Navymen Winning Gold, Silver and Bronze Badges in All-Navy Meet

In accordance with article 13-130 of the *Landing Party Manual*, the Chief of Naval Personnel awards suitably engraved medals to the leading individuals for places in each individual rifle and pistol match fired in the U.S. Navy Competition.

Awards presented during the All-Navy Competition were:

GOLD BADGES

For Pistol—

B. S. Adams, ADC, USN, VF-101, NAS Key West — 556 x 600

For Rifle—

A. A. LeTourneau, BMC, Headquarters Com 11 — 380 x 440

SILVER BADGES

For Pistol—

G. D. Casey, GMC, USN, USS *Frank Knox* (DDR-742) — 551 x 600

LTJG K. W. Collier, USN, BMU-1, NAB Coronado — 548 x 600

L. F. Becker, CMH3, USN, NAU Coronado — 547 x 600

For Rifle—

LT D. N. Strasheim, USN, NAAS Kingsville — 379 x 400

D. D. Dyck, TE/RM3, USN, COMSERVPAC — 378 x 400

LTJG C. E. Quesnoy, USN, NAVSUPCEN Oakland — 376 x 400

D. Clay, RDC, USN, RTC, NTC San Diego — 372 x 400

LT R. J. Anderson, USN, USS Segundo (SS 398) — 372 x 400

J. D. Meloy, CT1, USN, NAVSECRU C.Z. — 372 x 400

BRONZE BADGES

For Pistol—

W. J. Dorrity, ACC, USN, ASR 2, NAS North Island — 543 x 600

M. C. Schoonerwoerd, ADC, USN, NAS Corpus Christi — 543 x 600

F. F. Steputis, SOG2, USN, USS *Marshall* (DD 667) — 542 x 600

P. L. Beatty, AD1, USN, VF-101, NAS Key West — 537 x 600

D. D. Dyck, TE/RM3, USN, COMSERVPAC — 537 x 600

Pistol Medal

Rifle Medal

For Rifle—

ENS J. S. Sexton, USN, NAS Patuxent River — 371 x 400

M. B. Branch, PMC, USN, NTC Great Lakes — 370 x 400

CDR G. Geisman, USN, USS *Sperry* (AS 12) — 368 x 400

H. C. Haller, MMLC, USN, DESLOT 3 — 367 x 400

M. L. Golden, BM2, USN, USS *Vermilion* (AKA 107) — 367 x 400

LT D. E. Gay, USN, NAS Corpus Christi — 367 x 400

G. R. Maves, MA2, USN, NTC San Diego — 366 x 400

C. E. Jirel, BMC, USN, NTC San Diego — 366 x 400

Winning team members receiving place badges included:

GOLD BADGES FOR RIFLE

WO William Geil, USN, USS SPERR (AS 12) — 224 x 250

LT C. E. Tate, USN, Staff, COMSUBDIV 51 — 226 x 250

SILVER BADGE FOR PISTOL

D. Clay, RDC, USN, NTC San Diego — 264 x 300

W. C. Powell, GM1, USN, NTC Great Lakes — 272 x 300

J. C. Martin, PN2, USN, PACRESLT San Diego — 266 x 300

LST Means Large, Steady, Terrific

ON 7 AUG 1942 the first large-scale amphibious invasion by the modern Navy took place on Guadalcanal in the Solomons. This invasion was an up-to-date concept of an age-old technique for landing troops on an enemy's beaches.

The Greeks used this method of warfare when they attacked the city of Troy in Asia Minor. They crossed the Aegean Sea and stormed the beach near Troy in one of the earliest known amphibious landings.

Many years later in 1776, Commodore Esek Hopkins landed Continental sailors and Marines at New Providence, in the Bahamas, for the U. S. Navy's first amphibious landing. During the Civil War, there were Union landings in both North and South Carolina.

During those early battles, ships were not built specially for amphibious landings. But at Guadalcanal and throughout World War II, landing ships of various size and description landed on hostile beaches with men and equipment sufficient to fight a war. Never before had such heavy fighting equipment been put ashore on the very doorstep of the enemy, and never before did we have ships capable of doing this.

The heavy equipment was embarked in the LST (Landing Ship, Tank), the largest of the landing ships. This rather large, slow, cumbersome-looking ship—sometimes referred to in the Force as Large, Slow, Target—is the mainstay of an amphibious operation. It carries heavy loads which include not only men, but tanks, trucks and guns.

During the war years, the LST together with other landing ships and boats of the Amphibious Force made up a powerful "alphabet fleet." Those ships, known only by number and letters, became famous throughout the Pacific area. (In 1955, however, LSTs were named for counties and parishes in the United States. Other landing ships and craft are still known only by number and letters.)

BEFORE THE INVASION of North Africa early in WW II, General George S. Patton, commenting on the difference between plans, schedules, and how they were carried out in the past, had some reservations about the Navy's ability to land the Army at the planned time and place. "If you land us anywhere within 50 miles of our objective and within a week of D-day, I'll go ahead and win . . . ."

The General underestimated the newly formed Amphibious Force. The Navy *did* land his troops and equipment on time and in most cases at the appointed spots, and, as Patton stated he would, he did go on to win the battles.

Throughout the Atlantic and the Pacific, LSTs and their smaller sisters took part in one successful invasion after the other. Well known and hard fought battles such as Tarawa, Iwo Jima, Okinawa, Salerno, and Sicily tell not only the story of World War II, but also that of the Amphibious Force.

And any story of the Amphibious Force also tells the story of the LST. You might say that ships of the Amphibious Force are like a family. The transports and other support ships act as the parents, and the big brother LST goes forth into battle with the smaller children. They are a tough, hard-fighting family.

LSTs were versatile then, as they are today. During the invasion of Normandy, for example, LSTs were equipped for casualty evacuation, with facilities for about 200 patients. The job of these ships was to hit the beach with war equipment and to be ready to leave with wounded men. Those ships were huge targets sitting on the beach while wounded men were being embarked.

THE LSTS of those earlier days of World War II were smaller than today's. Their full-load displacement was 4080 tons, over-all length was 328 feet, and the extreme beam was 50 feet. The trial speed was 11.6 knots, and they had a troop capacity of 175 and a complement of 120 men. The tank deck was 260 feet along.

Postwar LSTs grew. Full load displacement jumped to 6000 tons, over-all length to 382 feet, beam to 54 feet, speed to 14 knots, troop capacity to 197 and complement to 190 men. The additional 54 feet in length permits roomier accommodations for both crew and troops and more space for tanks, trucks and cargo.

LSTs have undertaken some varied and unusual jobs during their existence. One of the most unusual finally brought about a change in designation for USS *Alameda County* (former LST 32). Now known as the AVB 1, she is the only Advanced Base Ship in the Navy.

Alameda County was originally converted and modified for evaluation as an amphibious aircraft tender.

As such, *Alameda County* challenged any ship that claimed fame for being unusual. To add to its unusual situation, the commanding officer's billet called for an aviator with the rank of commander.

The versatile *Alameda County* still operates with the U. S. Sixth Fleet in the Mediterranean. Not only is she capable of handling or servicing seaplanes, but she is also capable of setting up a seadrome and building an airport as well.

To set up an advance aviation base, *Alameda County* hits the beach, lowers her bow ramp and starts unloading equipment. Bulldozers and other construction equipment roll out and begin the groundwork for the air field.

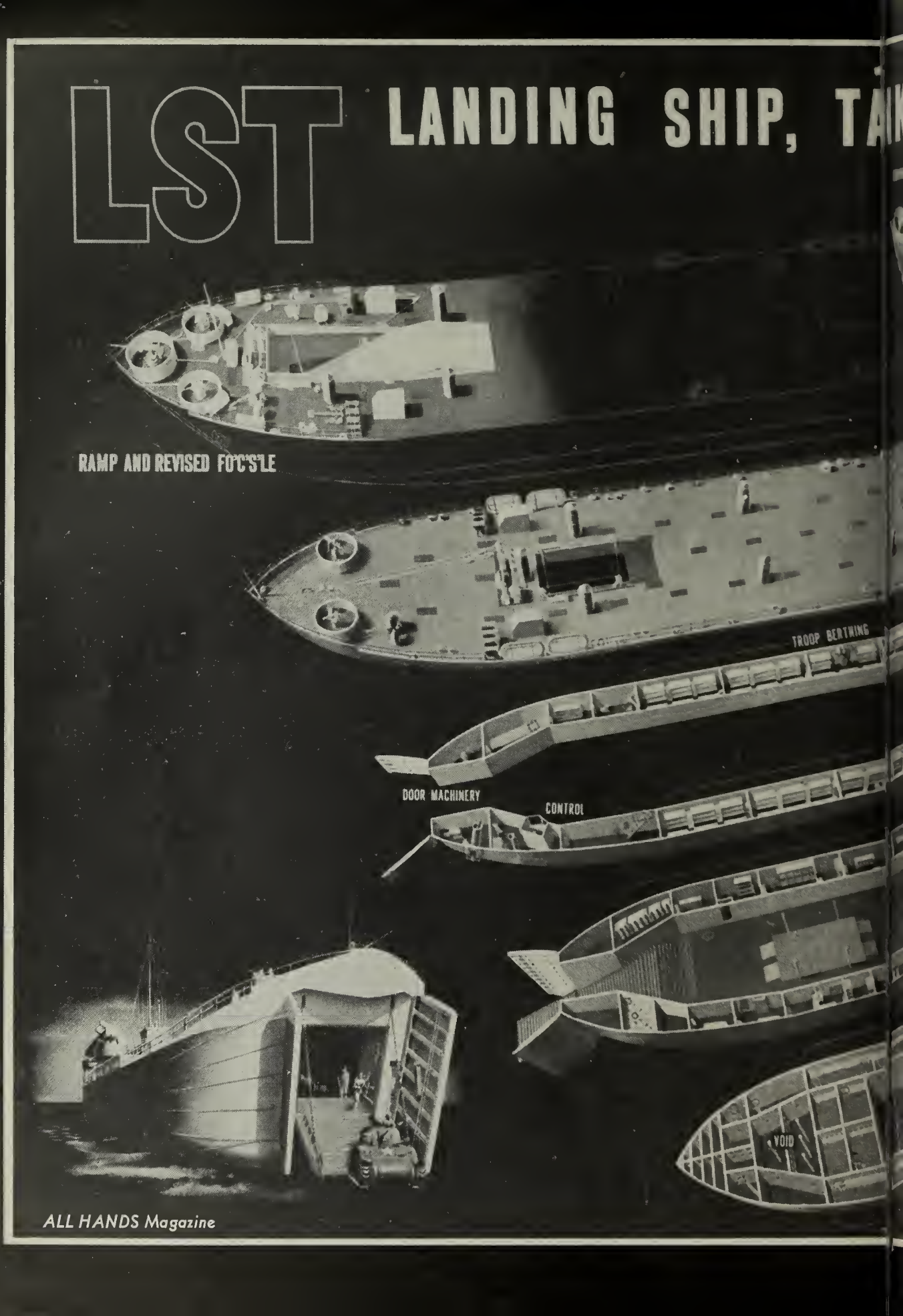
LSTS HAVE NOT ONLY TENDED seaplanes but they have also operated with helicopters aboard. An example of this was during the Korean campaign. A helicopter operated from the deck of LST 799 (now USS *Greer County*). The job of the whirlybird was to help the minesweepers spot enemy mines. But the copter also served another purpose. While it was hunting mines, it also hunted and rescued downed American fliers.

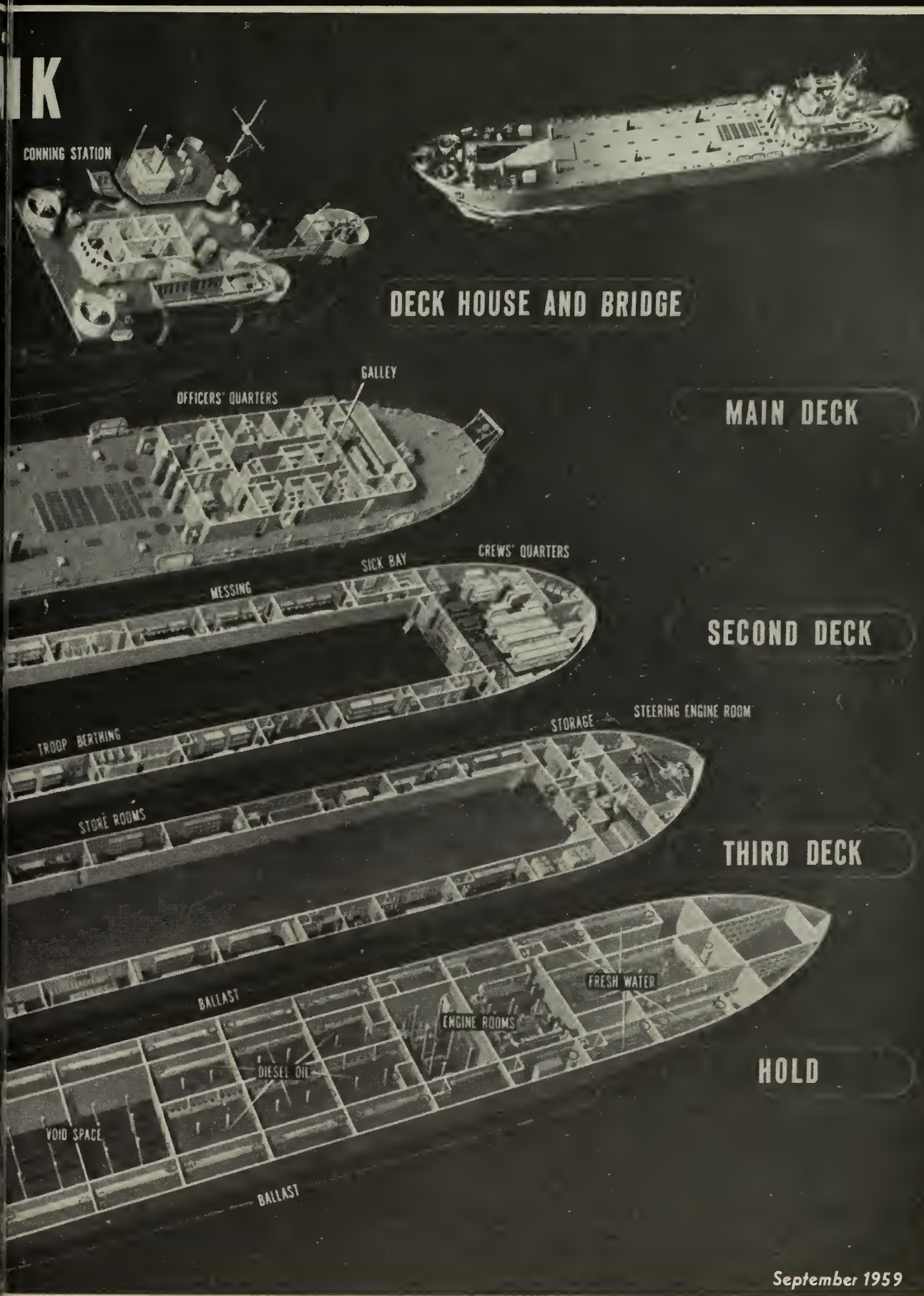
One morning it picked up seven airmen. On the first trip of the day, five men were plucked from the sea. Later the same morning, the helicopter went out again and rescued two more men—one on the way out, and another on the return trip.

Helicopters aboard LSTs are now more commonplace. In fact, throughout the Amphibious Force, helicopters are becoming increasingly popular.

Today there are approximately 50 LSTs on active duty in the Navy. About 35 of these are in the Pacific Fleet and more than 10 are in the Atlantic. These ships are commanded by either a lieutenant or LCDR.

LST LANDING SHIP, TA

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TROOP BERTHING
STORE ROOMS
THIRD DECK
FRESH WATER
BALLAST
ENGINE ROOMS
DIESEL OIL
HOLD
VOID SPACE
BALLAST

★ ★ ★ ★ TODAY'S NAVY ★ ★ ★ ★

OUT TO SEA—*USS Newell* (DER 322) heads to sea where she will take part in our early warning system. She makes her home port in Charleston, S. C.

Bainbridge to Sail Again

The Navy's first nuclear-powered guided missile frigate has been named for one of the heroes of the sailing ship era—an era when such items as atomic power and guided missiles were undreamed of.

Commodore William Bainbridge, who battled the Barbary pirates in the War of Tripoli, and commanded the frigate *Constitution* during the War of 1812, is the Navy hero in question.

Now under construction at Quincy, Mass., and officially designated DLG (N) 25, *Bainbridge* is slated for delivery early in 1962.

In operation she'll boast twin sea-to-air *Terrier* guided missile mounts fore and aft, and will also carry anti-submarine weapons. Nuclear propulsion will equip her with a far greater cruising range at high speed than conventional frigates.

Bainbridge will become the third atom-powered surface ship to step up the Navy's striking power. The guided missile cruiser *Long Beach* and the attack aircraft carrier *Enterprise* are scheduled to be launched in late 1959 and 1960, respectively.

The present *Bainbridge* will be the fourth Navy ship to bear that name. The preceding three were a 12-gun brig which captured a rebel steamer in the Civil War; the DD 1, of World War I vintage, and DD 246, which served as an escort in the Atlantic and Caribbean during the Second World War.

YESTERDAY'S NAVY

On 4 Sep 1923 the dirigible USS Shenandoah made her first flight. (She was commissioned a month later.) On 5 Sep 1776 the Marine Committee of the Continental Congress decided upon the uniform to be worn by officers of the Navy and Marine Corps. On 6 Sep 1918, when the transport Persia was torpedoed while carrying 2800 American troops, U. S. destroyer rescued everyone on board. On 12 Sep 1942 Brazil placed its World War II fleet under the operational control of the U. S. Navy. On 20 Sep 1942 a U. S. Naval Operating Base was established at Auckland, New Zealand.

New Jet Trainer

The Navy has issued a contract for the T2J-1 jet trainer. This new plane will provide the Naval Air Training Command with a versatile aircraft in which it can teach students instrument work, gunnery, formation and tactics, aircraft carrier pilot qualifications and other diversified operations.

The T2J-1 has a top speed of about 420 knots (500 miles per hour) and a landing speed of only 71 knots.

Powered by a J34 jet engine which develops 3400 pounds of thrust, the tandem-seat trainer has a service ceiling of more than 40,000 feet and a range of 780 nautical miles. It is about 38 feet long and has a wingspan of 36 feet.

The T2J-1 is equipped with a rocket-propelled emergency escape system by which a pilot can safely eject himself either at ground level or in the air.

Six T2J-1s have already been delivered to the Navy and are undergoing extensive tests at the Naval Air Test Center, Patuxent River, Md. The Naval Air Basic Training Command, Pensacola, Fla., should receive several of these new planes about mid-summer. They will eventually replace the T2V "*Seastar*" jet trainer at both Pensacola and Memphis.

All-Weather Fighters Ordered

The Navy has contracted for production of more F8U-2N jet fighters.

The plane—a carrier-based, all-weather jet—can fly at almost twice the speed of sound. It is basically a development of the F8U-2 *Crusader*, and some F8U-2Ns have already been ordered under previous *Crusader* contracts.

The new aircraft has increased capability for detecting and destroying targets in darkness and inclement weather. It is equipped with improved radar, push-button controls which relieve the pilot of many routine tasks, revised interior and exterior lighting systems and better instrumentation. It can carry heat-seeking *Sidewinder* missiles and will also be able to handle other missiles now under development. Fleet delivery is expected in 1960.

Frogmen Ride Colorado River

A fleet of seven IBS's (Inflatable Boats, Small), manned by 35 Navy frogmen, has completed a 250-mile trip down the Colorado River.

The 35—members of the Pacific Fleet Amphibious Force's Underwater Demolition Team TWELVE—accomplished the feat in five days as a survival problem. They paddled the river from Needles, Calif. to Yuma, Ariz.

Each man was provided with a pack containing two survival rations, one individual "C" ration, a fishhook and line, a poncho, half of a parachute and a first-aid kit. Survival for the five days depended on this small parcel, plus whatever "natural" food the frogmen could obtain.

The trip was not without obstacles. As the river approaches the Parker Dam it widens into Havasu Lake, which was encountered the second day out. Here, unfavorable wind and a slight current caused the loss of valuable time. To make up for the delay the crews had to man their paddles on some stretches for more than 16 hours.

Temperatures above 100 degrees also helped to harass the men and slow their progress—but frequent swim calls brought some relief.

Five portages were required to bypass dams. The longest, around Parker Dam, called for packing the 250-pound boats and approximately 300 pounds of gear nearly a mile overland.

The fourth night found the seven boats and crews at Imperial Dam, just 20 miles from their objective. There, since only a slight flow of water is allowed through the dam, the rubber boats ran aground on one sand bar after another. Clearing obstacles nearly drained the last reserve of strength from the already tired frogmen—to whom Yuma was a welcome sight.

Cool, Man, Cool

The Navy will soon get a new type of rubber and asbestos insulation material which is expected to extend the burning time of solid propellant rocket motors to three or four times the present burning period of one minute or less.

Developed for the Bureau of Ordnance by a civilian corporation, the new material is lighter, less costly and provides improved high-temperature insulation in comparison with the high-cost reinforced insulation currently used in some rocket motors.

During recent successful test firings, solid fuel motors using the new insulating material produced significant thrust levels for more than three and a half minutes. Although the high performance propellant generated a flame temperature of more than 5500 degrees Fahrenheit, the exterior of the rocket motor case registered only 200 degrees at the end of three and a half minutes.

This new development is expected to make solid propellant rocket motor propulsion systems more versatile, and to increase their missile and space applications.

LIBERTY TIME — Sixth Fleet sailors leave their ship, *USS Des Moines* (CA 134), and head for good times.

Farewell to Gallant *Leyte*

USS *Leyte* (CVS 32), who has steamed about half a million miles and recovered some 70,000 planes during 13 years of very active duty, has been retired.

Named for the Battle of Leyte Gulf, one of the biggest naval engagements in history, the *Essex*-class carrier was launched 23 Aug 1945 at Newport News, Va. She was commissioned on 11 Apr 1946 as an attack carrier.

Leyte's maiden voyage took her through the Panama Canal and along the west coast of South America for a goodwill tour. She flew the flag of ADM Marc Mitscher, USN, the task group commander.

The years from 1946 to 1949 were highlighted by three Mediterranean cruises and numerous Fleet exercises. During that period, *Leyte* was flagship for ComCarDiv Four, flying the two stars of the Division Commander.

In the spring of 1950 the ship again stood out of her home port, Quonset Point, R. I., for a "Med" cruise, but this one was to prove far different from the others. The outbreak of the Korean conflict found her at Beirut, Lebanon, and under urgent orders she immediately steamed for the Far East. Her average speed was 23 knots during the 18,500 miles she covered to report to Commander Seventh Fleet for duty. Her first night in Korean waters was spent in refueling. The following day she began launching her jets against the advancing North Korean army.

For 108 days *Leyte* operated in the Korean area, spending 92 of those days at sea. Her 52 days in a row at sea set a record among the

FOLLOW ME—*USS Dealey* (DE 1006), name ship for one of the Navy's newest DE classes, leads a destroyer task force in Pacific waters off South America.

flat-tops that fought in Korea.

From *Leyte's* decks, 3933 sorties were flown, for a total of 11,000 hours in the air. Her planes were credited with one of the first kills of a MIG 15, and one of her pilots, LTJG Thomas J. Hudner, was awarded the Medal of Honor.

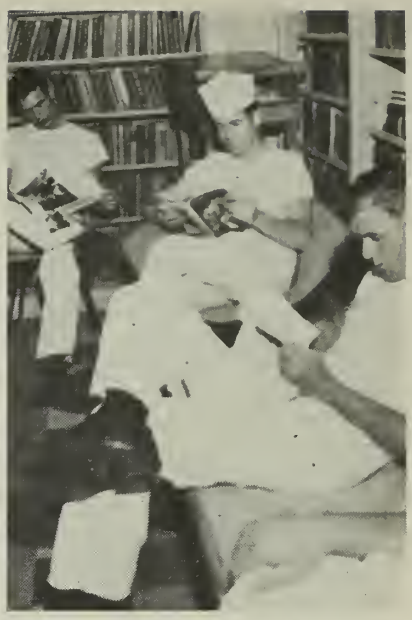
The ship came home in late January 1951, proudly wearing the Navy Unit Commendation and the Korean Presidential Unit Citation Badge. She was given a yard overhaul at Norfolk, Va., following which she left for her fifth Med cruise.

In the spring of 1953 *Leyte* entered the Boston Naval Shipyard for extensive overhaul and repair designed to ready her for a new role. She was to become the Navy's first CVS (ASW Support Aircraft Carrier).

During this yard period, disaster struck. At 1515, 16 Oct 1953, there was an explosion in the port catapult machinery room which killed 37 and injured 39 more. *Leyte's* crew immediately went to work to repair the torn and crippled ship, and three months later she stood out of Boston Harbor on her way to a new career.

After a shakedown cruise to Guantanamo Bay, Cuba, the ship was loaded with the then brand-new S2F aircraft. She spent the rest of 1954 learning the techniques of antisubmarine warfare.

In 1955 *Leyte* engaged in three Fleet exercises and made her sixth voyage to the Mediterranean. She was also made the flagship of ComCarDiv 18, a position retained for the remainder of her active service in the Navy.



POPULAR SPOT—Cruisermen aboard *USS Macon* (CA 132) get a lot of joy and knowledge from ship's library.

Leyte spent her last few years in continuous ASW work. As a CVS, she was the nucleus of a hunter-killer force whose job was to detect, hunt and kill enemy submarines. She helped evolve tactics to be used in operations against nuclear submarines, and in 1958 her diligence and ability brought her the Battle Efficiency Pennant as the outstanding ship of her class.

However, her age was beginning to show. In January 1959 she entered the Brooklyn Naval Shipyard for decommissioning. By then, she was the oldest carrier in continuous active service.

When she retired on 15 May, she left behind a reputation as "a fighter and a steamer."

Amphib Assaults on Two Coasts

Two Navy-Marine amphibious assault maneuvers were staged recently at opposite ends of the United States.

Exercise *Twin Peaks*, at Camp Pendleton, Calif., by far the larger, was the biggest amphibious exercise held on the West Coast in more than two years. More than 60 Navy ships and some 25,000 Marines of the 1st Marine Division and 3rd Marine Aircraft Wing, were involved.

Meanwhile, at Onslow Beach, N.C., units of the Atlantic Fleet and students from Marine Corps Schools, Quantico, Va., conducted *Packard X*. The tenth in a series of amphibious exercises begun in 1947, the operation was part of annual graduation exercises for more than 300 officers.

Both exercises involved extensive use of "vertical envelopment," the Marine Corps technique of lifting combat troops from ships and landing them behind enemy lines by helicopter.

The ex-aircraft carrier *Princeton*, recently redesignated as LPH 5, received her baptism in her new role during the *Twin Peaks* exercise.

Marines in full battle gear boarded ships at San Diego, Oceanside and Long Beach. After a rendezvous at sea, the entire armada conducted a rehearsal landing at Coronado's Silver Strand.

Following the rehearsal the task force put out to sea again, and shore bombardment and replenishment exercises were held before the assault on the Camp Pendleton beaches began.

Packard X was designed as an exercise in "limited war" according to the NATO concept. Assuming that a mythical country had been overrun by unfriendly forces, the amphibious task force—using both

Grand Order of Muskies Joins Blue-Nose Shellbacks

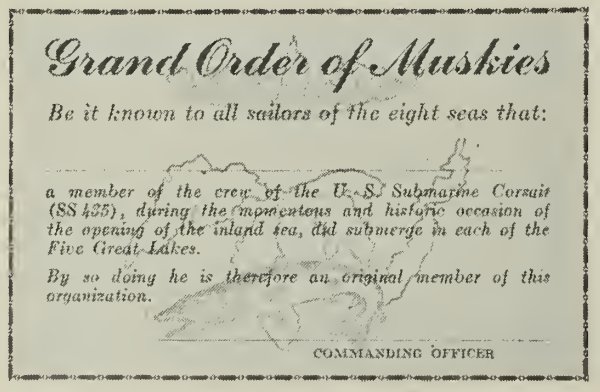
Move over, all ye Whale Bangers, Blue Noses, and Snorklers. Make space for the Grand Order of Muskies.

It will do you no good to make application. The rolls are closed. Only those crew members of USS *Corsair* (SS 435) who participated in Operation Inland Seas are eligible.

They had the privilege of submerging in each of the five Great Lakes and, just to round out the record, it might be noted that their craft was completely submerged in Lake Ontario 29 June; Lake Erie, 3 July; Lake Huron, 4 July; Lake Michigan, 8 July; and Lake Superior, 10 July.

During the cruise, *Corsair* also visited the ports of Alexandria Bay, N. Y., Milwaukee, Wis., Duluth, Minn., Bay City, Mich., Cleveland, Ohio, and St. Catherines, Ont., Canada.

Corsair also claims to be the only sub ever to have dived in all five Lakes.



Grand Order of Muskies

Be it known to all sailors of the eight seas that:

a member of the crew of the U. S. Submarine Corsair (SS 435), during the momentous and historic occasion of the opening of the inland sea, did submerge in each of the Five Great Lakes.

By so doing he is therefore an original member of this organization.

COMMANDING OFFICER

vertical envelopment and conventional amphibious techniques—was charged with seizing a beachhead on the eastern seaboard of said mythical country, and capturing the capital city.

The officer students, of the rank of captain through colonel, from the Junior and Senior Schools at Quantico, were completing nine months of schooling. They filled command and staff billets for the exercise, coordinating land, sea and air forces in solving combat problems and successfully carrying out the campaign.

In addition to seven Navy ships and some 1500 sailors, 1000 support troops from the Second Marine Division and Force Troops, Fleet Marine Force, Atlantic, aircraft from the Second Marine Air Wing, Cherry Point, N.C., and 250 Marines from MarCorps Schools, Quantico, assisted in the operation.

Twenty Ships for OpTEvFor

The Navy has established an Operational Test and Evaluation Force (OPTEVFOR) to centralize and strengthen the Navy's research and development program. Rear Admiral William D. Irwin, USN, former commander of Operational Development Force, Atlantic, has been named to head the new organization.

To carry out the mission of coordinating responsibility for all test and evaluation projects, OPTEVFOR will have operational control of more than 20 experimental ships—among them USS *Norton Sound* (AVM 1), USS *Sarsfield* (EDD 837) and USS *Baya* (AGSS 318).

Four air development squadrons of the Atlantic and Pacific Fleets are also part of OPTEVFOR. Additional aircraft and ships may be assigned at various times to help carry out certain projects.

ASW Research for NATO

If the increased emphasis and combined efforts of the NATO nations are any indication of what to expect in the future, many of the antisubmarine problems encountered today may be solved.

A new international research laboratory—known as the SACLANT ASW Research Center—has been established at the Italian Naval Base at La Spezia. As the name implies, this naval laboratory will study and help solve problems in antisubmarine warfare.

The NATO nations coordinating their talent and efforts at the research center include Canada, Denmark, France, Germany, Italy, the Netherlands, Norway, the United Kingdom and the U.S.

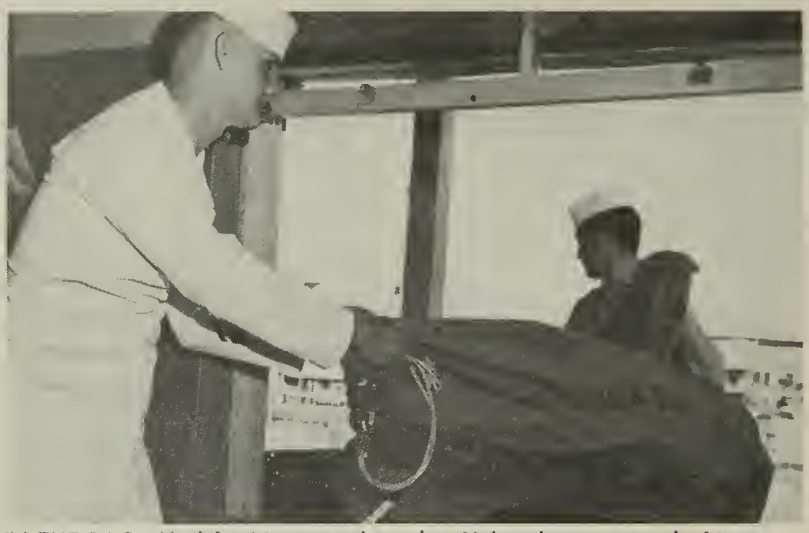
The laboratory will operate under the policy direction of SACLANT in coordination with pertinent NATO agencies. SACLANT's guidance will be provided by a staff of six military officers chosen from the participating nations.

Scientific knowledge of the member nations will be pooled in the center, and findings of new studies funneled back to participants. All NATO nations with ASW potentialities will have free access to the findings.

The research center will monitor and analyze oceanographic measurements in selected waters. Among other chief functions will be operational research and analysis plus limited developments in various phases of antisubmarine warfare.

HELLO OR GOODBY—It doesn't make much difference to this toddler. The main thing is that it's about nap time.

TIRED OF SALTY SCENES?—Just to show you the Navy's not all sea duty, here's how a day begins for many men ashore.



IN THE BAG—Mail for Navymen based at Yokosuka nears end of journey.

Neither Rain, Nor Sleet, Nor Snow Halts Yokosuka PO

The more distance there is between a Navyman and home, the more his mail means to him. Since there are a great many miles between Japan and the United States, the mail handled by the Navy Post Office at U. S. Fleet Activities, Yokosuka, therefore assumes considerable importance to the Navymen who send and receive it.

Every day some three tons of letters and packages arrive there—either coming to or going from Navymen stationed in Yokosuka or in Seventh Fleet ships in the Yokosuka area.

According to Navy Postal Clerk Frederick J. Kelley, YNC, USN, the unit is "one of the largest Navy Post Offices in the world, financially, with a fixed credit of $50,000."

It is staffed by 16 men, whose job is to sort the letters and packages and get them to their intended receivers as efficiently and promptly as possible. This they do in typical Navy style.

The office provides the usual services from selling money orders and stamps to handling parcel post and registered mail. Money order sales average about $75,000 a month and stamp sales come to a grand total of about $25,000 per month.

The office also provides a special service to ships which make Yokosuka their first port of call after crossing the Pacific. When such a ship is sighted by the Operations Control Tower, the Station Boat Pool is immediately notified to have a boat ready so that a postal worker can meet the ship with the mail. Usually, the incoming ship has its mail within 10 minutes after she's dropped the hook. This service is performed on a round-the-clock basis.

Located on the station at Yokosuka are 16 mail boxes which are emptied twice a day, seven days a week. This mail is taken to the post office and, with mail from the ships in port, is sorted and delivered to Yokohama.

The Yokohama Navy Post Office, which is the terminal office in the Far East, then combines this mail with letters and packages from other bases in the area and delivers airmail to either Tachikawa Air Base or Tokyo International Airport for the flight to the United States. Within an hour after the mail is delivered to Yokohama it is on its way to one of the two airfields, where within a few hours it is loaded aboard a plane. Parcel Post is promptly dispatched by ship to the United States.

According to the Yokohama Postal Officer, Wave LTJG Betty Bingham, USN, the unit's biggest problem is caused by the failure of personnel to fill out change-of-address cards when they enter or leave the area.

"They're the ones who register most of the complaints about lost or delayed mail," she says.

—Robert Hanson, JO3, USN.

Ammo Control System

The Navy is using a new electronic "data processing system" to help keep count of its missiles and ammunition throughout the world.

Devised by the Bureau of Ordnance, the new method uses an all-transistor, high-speed data processing system. Named RCA 501, it should provide fast inventory control of missiles, mines, torpedoes, bombs and bullets from the time they start through the production line until they have been expended.

The first phase of the logistics program will be to place BuOrd's world-wide inventory setup on a daily basis. Eventually, the system will be employed for over-all logistics control of non-expendable items—such as guns, gun mounts and missile launchers—as well as for financial management, quality evaluation and research project management.

Tanker Fights Rust

Navy tankers in the future may not need to replace wasted steel in cargo tanks as often as is now required. The inside of the tanks will probably be protected from corrosion by some sort of inorganic, plastic or rubber coating.

Recently USNS *Yukon* (T-AO 152) finished a one-year test of different types of these protective coatings in 10 cargo tanks. These tanks were still smooth and scale free after the one-year period. The remaining cargo tanks had been left completely unprotected, as they are aboard most tankers. They were rusty when the test year ended.

In the past, rust may have caused different kinds of trouble. In some cases, jet flameouts have been blamed on the powdery rust that might have come from a corroded tank. (A civilian tanker company has predicted that within a year all ships that carry jet fuels will be required to have a protective coating in their tanks.)

According to *Yukon's* master, Captain David M. Rawlins, a satisfactory coating could protect the tanks indefinitely. Unprotected tanks last only about 10 to 12 years. To replace them costs from one to one and one-half million dollars in a ship the size of *Yukon* (25,000 tons). It is estimated that if a special coating were put on the tanks when a ship is built, it would add about $600,000 to the original cost.

It's All for Navy Relief

PRETTY GIRLS, air shows, pretty girls, fireworks and pretty girls attracted about 100,000 people to a three-day Navy Relief Festival at the Naval Air Station, Corpus Christi, Tex.

One of the highlights of the occasion was a 3000-dollar fireworks display which brought the usual "oohs" and "ahs" from the audience. Another was a display of precision marching by an all-girl drill team. On both Saturday and Sunday of the festival wekend, air shows were held with local Navy aircraft participating.

A variety show ran continuously throughout the festivities, with over 80 different acts providing entertainment for audiences of all ages.

During the final activities on Sunday a beauty pageant was held, with 10 girls competing for selection as 1959's "Miss Corpus Christi" and "Miss Navy Relief." The first title went to the candidate of Advanced Training Unit 601. The second was won by the representative of the NAS Marines.

Top: Some of the thousands of visitors look over the aircraft on display during the festival. *Top right:* Miss Noelle Jane Engler—"Miss Corpus Christi of 1959." *Right:* Miss Shirley Perkins—"Miss Navy Relief of 1959." *Bottom:* Local beauties line up to compete for "Miss Corpus Christi" title.

SERVICESCOPE

Brief news items about other branches of the armed services.

A NEW IDEA about coping with the annual North Atlantic iceberg threat has been tried out. It only proved that ice patrols are still necessary.

The latest venture, conducted by the U.S. Coast Guard, consisted of bombing a 300-foot iceberg with 985-pound incendiary bombs. The iceberg was grounded in 300 feet of water. It was as tall as an 18-story building and believed to weigh a million tons.

The Coast Guard had hoped that the gigantic berg would split in half under the stresses set up by the heat of the incendiary bomb and would, as a result, melt faster. However, like previous attempts with gunfire, torpedoes and demolition mines suspended below the water, the incendiary bombs proved unsuccessful.

During the past summer, the iceberg threat in the North Atlantic was one of the three most severe since *Titantic* sideswiped one and sank in 1912.

The *Titantic* sinking, which took 1500 lives, occurred about 300 miles from the scene of the Coast Guard's bombing experiments.

Because the threat was so great this year, the Coast Guard dispatched the 255-foot cutter USCGC *Androscoggin* (WPG 68), normally assigned to search and rescue duty out of Miami, Fla., to the North Atlantic to augment the efforts of other ships and aircraft on the ice patrol.

This year icebergs were present even in Track "A," the most southerly ocean route to Europe. One iceberg —1000 miles off shore—floated as far south as New Jersey before it melted.

★ ★ ★

THE ARMY SIGNAL CORPS has successfully tested a miniature flying *Snooper* drone which is designed to observe activities behind enemy lines.

A remote-controlled aircraft drone designated SD-3, the *Snooper* has made four successful flights at the Army's test facility in Yuma, Arizona. Each flight requires successful rocket launch, transition to flight, actual flight, and recovery, all controlled either by preprogramming the drone or by controlling it from a ground or air station.

The longest of the four test missions lasted more than 30 minutes. During the flight the SD-3 swooped in on eight different simulated targets, obtained necessary data for the ground troops, and was successfully recovered.

DIG THIS—Mechanical ditch-digger being tested by the Army will provide rapid protection for troops.

TRIPLE THREAT—The Air Force's F-102 *Delta Dagger*, an all-weather interceptor, launches deadly trio of *Falcons*.

The SD-3 weighs less than 1000 pounds, is 15 feet long, and has a wing span of 11 feet. It is packed with devices for guidance control and observation of enemy troop movements, fortifications and battlefield installations.

Interchangeable units in the nose of the drone enable rapid changes from one surveillance technique, such as photography, to a different type, such as infrared detection, radar or television.

In a typical mission the drone is launched from a mobile trailer by two rocket motors. Once in the air a 140-hp reciprocating engine takes over.

Recovery of *Snooper* is accomplished by an automatic parachute device which floats the drone back to earth. Special inflatable rubber mats contained within the drone cushion the fall.

Although the SD-3 can operate at varying altitudes, most missions are accomplished at low level where the drone's size and speed aid in dodging enemy radar and gunfire.

★ ★ ★

SPACE AGE men may some day stroll through the earth light in their gardens on the moon, if studies now being conducted indicate it is feasible to raise vegetables in green cheese.

Except for the part about the green cheese, that possibility is not so remote as it may seem, since lunar gardens could be very useful in the space age as a source of food at bases on the moon. Right now, under a research program being conducted for the Air Force's Ballistic Missiles Division by a civilian corporation, scientists are trying to determine the practicality of establishing such bases. Part of the program involves the investigation of problems to be overcome in supplying food to the people at those bases.

Such "delicacies" as algae, lichens and Iceland moss have already been mentioned as possible items in a space diet. However, since life at a lunar base would be more pleasant if the food were more down to earth, the scientists are trying to see how ordinary plants or vegetables might fare under the atmospheric conditions and accelerated growing cycles to be encountered in a lunar garden.

Such a garden would probably be grown inside a special greenhouse. An ideal moon vegetable would: Have a seed that is light per pound of vegetable pro-

duced; germinate readily and not be sensitive to light, gravity, X-radiation or cosmic rays; not require oxygen; be edible, raw or cooked—roots, leaves and all; provide a balanced diet of proteins, fats, carbohydrates and vitamins; and have a short growing period in full sunlight, at low pressures under a wide range of temperature conditions. At present, all this cannot be attained in any one vegetable. However, the diet requirements could be covered by just four vegetables—corn, roasted peanuts, soybean sprouts and lettuce.

In a preliminary laboratory setup the people doing the research for the Air Force have already tried raising turnips, carrots and beets at simulated pressure altitudes of 8000, 16,000 and 27,000 feet. They've also conducted similar experiments with beans—snap beans—that is—not moon beans.

★ ★ ★

THE ARMY WILL SOON GET a new general purpose machinegun which will eventually replace the three different types of 30-caliber machinegun now in use.

Called the 7.62mm M-60, it uses the standard 7.62mm NATO cartridge, and can be fired from the shoulder, from the hip, from a bipod, and from a newly developed aluminum tripod.

★ ★ ★

A RADICALLY NEW 35-MM. MOTION PICTURE CAMERA —that takes a picture four times wider than conventional 35-mm. cameras—has been developed for the Air Force.

This high-speed camera shoots about five feet of film a second. It is being used to photograph targets and flight paths of missiles fired from Air Force F-106 *Delta Dart* all-weather Mach 2 jet interceptors.

The new cameras—10 inches wide, 2½ feet long, 7 inches high and weighing about 50 pounds—were designed and built to fit into the wing leading edges on each side of the F-106's fuselage.

They have a fixed six-inch focal length lens which gives unusually high resolution in a wide frame. The image size of the new cameras is three inches wide and one inch deep. It takes the equivalent of four standard 35-mm. motion picture frames in one three inch segment of film. The image size of a conventional 35-mm. camera is about an inch wide and three-quarters of an inch deep.

JEEP BOAT RIDE—Army vehicle rolls aboard equipment assault boat for transport during field maneuvers.

HIGH-FLYER—USAF *X-15* rocket aircraft is designed to carry man up close to the fringes of outer space.

The new cameras can do the work of at least five standard 35-mm. cameras. They are pre-set and boresighted before the aircraft leaves the ground. The aircraft's electrical system provides power for the camera's motor. The pilot actuates the cameras from a control in the cockpit.

The new instruments can cover a 54-degree horizontal sector, photographing 15-foot objects nearly six miles ahead of the aircraft. Either color or black and white film may be used. Illuminated reference marks permit data analysis of film taken during night missions.

★ ★ ★

THE ARMY'S IRBM JUPITER is now ready for tactical missions.

This announcement was made after the Army had fired the 19th 1500-mile missile over the Atlantic test range. Of the 19 *Jupiters* launched to date—17 in tests and two in space research—only one was considered unsuccessful.

Later this year the *Jupiter* will be deployed overseas by the Air Force. It will be based at strategic sites throughout Europe.

The Army announcement said that the intermediate-range ballistic missile "has attained an unusual degree of accuracy, and is now ready for operational use."

Air Force personnel participated in the last four *Jupiter* launchings. They are members of the 864th Tactical Training Squadron, which was trained at the Army's *Redstone* Arsenal in Alabama where the *Jupiter* was developed.

★ ★ ★

A CONTRACT has been awarded for production of a new quarter-ton utility truck that will succeed the jeep as the Army's tactical, commercial and reconnaissance vehicle.

It is lighter than the jeep and rugged enough to be dropped from an airplane. Among its other features are cross-country mobility, low-fuel consumption and economy in maintenance.

The vehicle was developed under contract with the Army Ordnance Corps and pilot models have been under test since July 1954.

Deliveries are scheduled to begin in April 1960.

THE WORD

Frank, Authentic Advance Information On Policy—Straight From Headquarters

• **GOT ANY QUESTIONS ABOUT TRANSFERS**—your own or someone else's?

If you have, run, don't walk to your ship or station personnel office. They've got the answers for you in one neat package—the new *Enlisted Transfer Manual.*

Known as NavPers 15909, the new manual is designed to provide an official "bible" concerning the transfer and distribution of enlisted personnel. It consolidates all existing information and directives on the subject into one handy reference work.

Effective date of the new manual was 1 August, and distribution began at that time. If your ship or state office doesn't have a copy, it can be obtained through local Forms and Publications Supply Offices.

BuPers Instructions incorporated in the new book were cancelled as of 1 August. A list of these is contained in BuPers Notice 1300. Portions of the *BuPers Manual* superseded by the *Enlisted Transfer Manual* will be deleted.

• **CHANGING RATES** — If you're stymied in your climb up the promotion ladder because you're in an over requirement rating with slow advancement opportunities, it may pay you to consider attempting to change to a field affording faster promotion through the Navy's rating conversion program.

This program enables eligible personnel of the crowded ratings to convert to one of the more critical ratings through formal school or in-service training.

Eligible for this program are a limited number of personnel in each of the following: BM1, BM2, MN1, YN1, CS1, CS2, SH2, DC1, CM1, AD1, AO1, SD1, SD2, SD3.

The open rates to which personnel may convert include: SOC, SO1, SO2, SO3, RD1, RD2, RD3, RM1, RM2, RM3, AT1, AT2, AT3, SMC, SM2, IC1, IC2, QM2, QM3, TM2, TM3, NW2, NW3, OM2, OM3, ET2 and ET3.

These are the current "over" and "under" ratings announced in Change Two to BuPers Inst. 1440.18B.

• **SAN ANTONIO HOPS**—San Antonio, Tex., which *used to be* a good place for traveling Navymen to catch free plane rides to other points, is now a likely spot for you to get yourself stranded if you go there seeking a "hop."

Because San Antonio is a well known center of Air Force activity, armed forces travelers sometimes get themselves stranded by going there in anticipation of getting somewhere else easily, quickly and cheaply. Unfortunately, the nature of aircraft operations from that area has changed, so that transients rarely—*if ever*—obtain hops from there nowadays.

When people do get stranded, the burden of getting them on their way (endorsements, TRs and such), falls on the Navy and Marine Corps Reserve Training Center, San Antonio. In the interest of reducing problems, confusion and disappointments all around, the Center is calling Navy-wide attention to the total lack of transient hop facilities in the area.

Now that you've read this, you certainly can't claim you didn't get the Training Center's message.

• **KOREA GI BILL BENEFITS FOR CAREER MEN**—If you're a career man completing your 20 in the next few years, and you're thinking of going to college, here's good news.

The Conditional / Unconditional Discharge question for Navymen reenlisting in the Navy has been resolved. This makes many career men eligible for Korean GI Bill benefits they thought were lost to them forever when they shipped over.

Career personnel have been concerned because discharges which were effected three months or less prior to the expiration of their enlistments were being ruled "Unconditional," even though they were for the express purpose of immediate reenlistment.

The Veterans Administration criterion for a "Conditional" discharge is that it be one which does not relieve a man from further active service.

A discharge three months or less prior to expiration of enlistment entitles a person to all of the rights, benefits and privileges of a completed enlistment, and relieves him of the obligation of further active service unless early discharge is for the purpose of immediate reenlistment. Such discharges were formerly ruled to be "Unconditional," and required the individual to commence his GI education or training within three years of the discharge date.

Obviously, if you had 14 years' service as of 1954, for example, and you were discharged three months or less before your expiration of enlistment for the purpose of immediately reenlisting for six years to complete your 20, you were not able to commence your education or training by 1957.

On the other hand, discharges more than three months early for the specific purpose of immediate

DON'T JUST SIT THERE—Play the game with your shipmates and pass this copy of ALL HANDS on to nine others.

reenlistment were considered to be "Conditional" discharges which did not require commencement of education within three years of the date of that particular discharge.

In effect, therefore, two categories of men were being discharged early for the purpose of immediate reenlistment. The three-year period for commencement of schooling applied to one group and not to the other.

Now, all persons discharged prior to expiration of enlistment for the purpose of immediate reenlistment will be considered to have received a conditional discharge.

So if you want to keep your eligibility for Korean GI Bill education alive, be sure to get an early discharge for the purpose of immediate reenlistment on board next time you ship over—in other words, get a "Conditional" rather than an "Unconditional" discharge. A word of caution—the deadline for completion of education or training under the Korean GI Bill is still 31 Jan 1965.

• **NROTC COLLEGE TRAINING PROGRAM**—If you'd like to start studying at one of 52 colleges or universities throughout the country under the NROTC program a year from now, and have done nothing about it, you'd better get a move on—a nomination from your CO must be in the Bureau of Naval Personnel by 19 October.

Provided your nomination reaches the Bureau on time, and if you are considered qualified, your skipper will receive a copy of the Navy College Aptitude Test, which you'll take on the Fleet-wide test date in December.

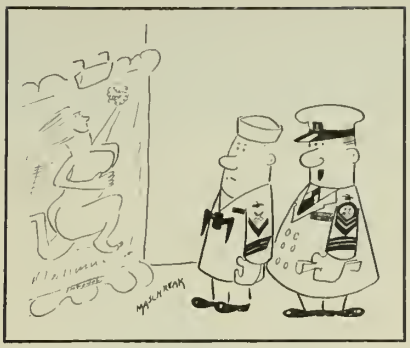
This test and your physical examination are the controlling factors which determine whether your application will be given further consideration.

The names of those who pass the college aptitude test will be published next spring, and next summer, if you're still interested in the program, you'll be ordered to the Naval Preparatory School at Bainbridge, Md. If you negotiate the Prep School successfully you'll be appointed midshipman in the Reserve and sent to an NROTC Unit at the school of your choice to begin your studies.

While studying for a baccalaureate in a field you select yourself, the Navy will provide you with:

• All tuition, books and fees.

David J. Majchrzak, DN, USN



"Let's go in—the second feature is a real good western."

• Retainer pay of $50 a month for four years.

• The required uniforms for wear at drills, on cruises, and at other functions for which uniforms may be prescribed.

• Three eight-week long summer cruises, during which you'll receive practical training and firsthand experience. Two of these cruises will be to choice liberty areas such as Europe and South America. The third normally takes you to Little Creek, Va., and Corpus Christi, Tex., for amphibious and aviation training.

• Upon graduation a commission as ensign in the Regular Navy or second lieutenant in the Regular Marine Corps.

So, if you're interested get your application in to your CO. All the information you need is contained in BuPers Inst. 1111.4C.

• **HOW TO WIN FRIENDS**—There's a lot more to the President's People-to-People Program than just suggesting that everyone go out and become a goodwill ambassador. To help you make the Navy's part in the program effective, a variety of useful materials for promoting international understanding is available to your ship or station.

The semi-annual catalog issues of the "I & E Newsletter" (NavPers 15801) list the materials available and spell out the procedures for procuring them. In addition, new materials are announced from time to time in the regular quarterly issues of that publication.

Materials produced or procured by the Office of Armed Forces Information and Education include pamphlets, films, pocket guides, posters, maps, reprints of various articles, and also language courses consisting of records with texts in 22 languages. In addition, there are available two-record language sets in 41 languages with accompanying phrase books; recordings of national anthems; and brochures on living conditions in overseas locations.

These materials may be procured separately, or overseas information kits of pre-selected materials may be requisitioned. These have been made up for seven different areas—Western Pacific, Southwest Pacific, Central Pacific, North Pacific, Caribbean, Mediterranean and North Atlantic Europe. They may be obtained from the Navy Supply Centers at Norfolk, Va., or Oakland, Calif. The kits are made up of suitable materials, less films, and are gauged to the size of the requisitioning command so that only one kit for a given area need be ordered.

Obtaining the kits is a simple matter. For instance, take a destroyer leaving the West Coast for the Far East. Before the ship departs, the skipper puts in a request to NSD Oakland, for a "WESTPAC Kit, DD Size." In return, the ship gets a selection of materials that include one set each of Japanese, Korean and Chinese language records, 30 language guides, 30 phrase books, pocket guides to the various countries of the Western Pacific, an assortment of maps, and posters designed to encourage individuals to participate in the People-to-People Program.

Films can be used to supplement the kits. They are available on loan from district training aids sections, training aids libraries and aviation film libraries. They are listed in the catalog issues of the "I & E Newsletter" and in the Navy Film Catalog (NavPers 10000-A).

A ship or station which is really on its toes can also obtain useful material and helpful information from various other sources. Among these are Fleet, force and area commanders; State Department public affairs officers; United States Information Service officers abroad; naval and military attaches; American business representatives abroad; the tourist and travel bureaus of different countries; religious, civic and fraternal organizations; ship, station or public libraries; foreign port officials; and liaison officers.

The role of ships and stations in carrying out the People-to-People effort in consonance with SecNav Inst. 5710.12 is outlined for ships and bases in BuPers Inst. 1560.2A.

THE BULLETIN BOARD

Here's NESEP: Two Ways to Four Years of College via Navy

The Navy Enlisted Advanced School Program (NEASP) has dropped its name and has merged with the Navy Enlisted Scientific Education Program (NESEP).

Both will remain in effect, with the old NEASP becoming course "A" under NESEP and the old NESEP becoming course "B" under the combined program.

Both the Navy Enlisted Advanced School Program, established in 1956, and the Navy Enlisted Scientific Education Program, established in 1958, were started because of the increasing demand for qualified personnel in the scientific and engineering fields in the Navy.

Individuals who finish the program and receive their baccalaureate will be ordered to Officer Candidate School, Newport, R. I., where they will take part in the curriculum there. If otherwise qualified, when they finish that course, they will be commissioned ensign in a category commensurate with their education, special qualifications, and the needs of the service.

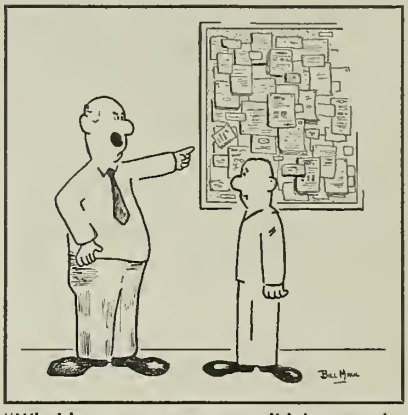
This single program offers an uninterrupted four-year college education program—including summer sessions—in designated colleges and universities, leading to a baccalaureate. Normally, the period of education will not extend beyond the baccalaureate level even though less than four years may be required to obtain a degree.

Course "A" under the new NESEP is the Systems Engineering Curriculum, and Course "B" is the Science/Engineering curriculum. Course "A" is given only at Purdue University and at the University of Washington, while Course "B" is offered at 20 colleges and universities throughout the United States.

Both men and women (married or unmarried) enlisted members of the Navy may apply. To be eligible, you must:

- Be enlisted in the Regular Navy, or Naval Reserve on active duty (This includes the TAR program).
- Be in pay grade E-2 or above.

All Navy Cartoon Contest
William Roger Maul, CT1



"Wha'da you mean you didn't get the word?! It's right there on the bulletin board!"

- Have at least six years' obligated service as of 1 July of the year selected if in the Regular Navy. If in the Navy Reserve, you must agree to join the Regular Navy for six years in the pay grade you hold on 1 July of the year selected for the NESEP program. All students must agree to extend their enlistment two additional years after completing the first two years of college.
- Not have reached 25 years of age by 1 July of the year selected.
- Be a high school graduate or the equivalent (as per GED test).
- Have a GCT plus ARI of 118.
- Be physically qualified in accordance with the *Manual of the Medical Department*. Candidates must have a minimum vision of 20/100 in each eye correctable to 20/20 if a waiver for this defect is recommended by BuMed. Those with defective color perception will only be considered for a program which leads to a commission in a restricted line or staff corps. A waiver is still necessary, however, for eventual appointment in the restricted line. All required dental treatment must be completed and minor nondisqualifying correctable ailments must be corrected before reporting to the Naval Preparatory School.
- Have a final Secret clearance before entering college.
- Have a clear record for the last two years of active naval service.
- Be a United States citizen.
- Be recommended by your commanding officer.

Men and women selected for this program will be ordered to the Naval Preparatory School, U.S. Naval Training Center, Bainbridge, Md., or to the Service School Command, U.S. Naval Training Center, San Diego, Calif., in the summer before entering college, for approximately nine weeks' temporary duty under instruction. During this period, selectees will receive refresher instruction in mathematics, physics, English usage, and orientation in college academic requirements.

While attending prep school, each selectee will be interviewed; a major field of study will be approved, and a college or university will be designated. After successfully completing the summer preparatory training, students will be ordered to a college or university to begin the fall semester. Leave will be granted during academic holidays, and the four-year course will be considered a normal tour of shore duty.

Trainees will be required to maintain their enlisted status while enrolled as students in a university or college, and will be eligible for advancement in rating the same as other enlisted personnel. Since students will eventually be considered for OCS, they will not be eligible for any officer in-service procurement program.

You may still have a chance to apply this year for training. Commanding officers have only until 15 September to order an examination for you. In BuPers Inst. 1510.69D, 1 August was set as a deadline for application by an individual to his commanding officer. It is emphasized, however, that this is only a guide line. Commanding officers have until 15 September to order examinations, and may set any deadline they desire prior to 15 September. Interested persons should contact their personnel office immediately—time is almost run out.

Ordering your examination does

not comprise a formal application. This formal application must be made on the Enlisted Evaluation Report, NavPers 1339 (Rev. 3-56) before 1 October.

The original NavPers 1339, completed Standard Forms 88 and 89 (results of physical examination), and all transcripts reporting the formal educational background of the individual applicant must reach the Chief of Naval Personnel before 1 October of the year preceding selection.

The written examination will be sent to your command by the Naval Examining Center, Great Lakes. These will be administered on the second Monday in November—this year, 9 November.

Selection of applicants for this program will be made during March of the year of college entrance, and will be based on the individual's service record, prior educational endeavor, commanding officer's recommendation, and screening examination scores.

There are several USAFI courses that should be helpful in obtaining a better score on the November screening examination. It may be too late to use them this year, but you can be ready for the examination and schooling next time. Here are the recommended courses:

- MB/CB 151 and 152, General Mathematics I and II. (Skim through this to determine in what areas you need further work.)
- MC/CC 164 and 165, Beginning Algebra I and II; MC/CC, Advanced Algebra (high school), or MD/CD 425, College Algebra.
- MC/CC 176 and 177, Plane Geometry I and II; MC/CC 178, Solid Geometry, or MB/CB 430, Analytic Geometry (college).
- MB/CB 188, Trigonometry (high school) or MC/CC 435, Plane Trigonometry (college).
- MC/CC 290 and 291, Physics I and II (high school) or MA 517, college Physics.
- MB/CB 781, Fundamentals of Electricity.

Other courses will be helpful if you have time to get them. They are:

- MB/CB 436, Spherical Trigonometry.
- MB/CB 858, The Slide Rule.
- MB/CB 440 and 441, Calculus I and II.

Both high school and college courses are listed so that prospective applicants may study the courses best suited to their educational background. The more courses completed, the better chance you will have—both to get a good qualifying score and, if selected, to do well in college.

For more complete details about NESEP see BuPers Inst. 1510-69D.

Three Titles Added To List Of Correspondence Courses

Three new Enlisted Correspondence Courses are now available. Three others have been discontinued.

Enlisted Correspondence Courses for active duty personnel will be administered (with certain exceptions) by your local command instead of by the Correspondence Course Center. Your division officer will advise you whether the course for which you have applied is suitable to your rate and to the training program you are following.

Personnel on inactive duty will have courses administered by the Center.

New courses are:

Title	*NavPers No.*
*Radioman 1 and C	91405-2
Aviation Machinist's Mate 2	91598
Dental Technician General 1 and C	91682

* May be retaken for repeat Naval Reserve credit

Discontinued Courses	*NavPers No.*
Radioman 1	91404-1A
Radioman C	91405-1A
Handbook for General Dental Technician	91684-A

WHAT'S IN A NAME

Antiaircraft Cargo Boom

A veteran general stores issue ship, holder of distinction unequaled by any other ship in the U. S. Navy (we think), has joined the Reserve Fleet.

She's USS *Mercury* (AKS 20)—and the highlight of an illustrious, hard-working and generally unsung 20-year career devoted to replenishment of the Fleet occurred during the Marianas campaign in World War II.

It was there, just south of Saipan, on 26 Jun 1944, that *Mercury* became the only U. S. ship to knock down a Japanese plane with a cargo boom.

The enemy torpedo bomber came a cropper while attempting to deal a death blow to *Mercury*, a project which came uncomfortably close to succeeding.

During a series of small air raids on the U. S. Fleet, which was protected by a heavy smoke screen, the Japanese bomber, flying at 90 feet, hurtled through the screen and loosed an aerial torpedo at *Mercury* only 200 yards away. Attempting to gain altitude, the plane avoided *Mercury*'s stack but smashed head-on into the starboard cargo boom, spun off, and crashed into the water some 1,000 yards away.

The aerial torpedo, meanwhile, never entered the water, but struck *Mercury* unarmed. It passed through compartments on the port side of the deck house, tearing open the warhead and air flask, and scattering TNT over the bridge and after section of the ship. The after body of the torpedo smashed into the deck house, killing a chief commissary steward. Many of the crew were covered with the explosive compound, and some were injured by the falling boom.

***Mercury* earned battle stars in five major Pacific operations, from the Marshalls to Okinawa.**

Launched in 1939 as the cargo ship SS *Lightning*, she was commissioned USS *Mercury* and began her Navy career in 1942 as an AK (cargo ship). She was converted to a general stores issue ship late in 1945, and, since 1946, has operated with the Service Force, Atlantic Fleet, shuttling between the U. S. and Europe in support of ashore and afloat units of CinCNELM.

It seems especially fitting that *Mercury*'s well earned rest will be as a member of the Texas Group, Atlantic Reserve Fleet, at Orange, Tex. Texans, everyone knows, are fond of bragging about their "firsts" and "onlys." When a boasting session gets underway, here's one ship which most certainly will be able to hold her own.

Just a Lot of Words—But They All Add Up to the New Navy

WORDS CAN BE DECEIVING. And now that new words from the innermost realms of advanced science are coming into everyday usage in connection with the new technical fields of importance to the Navy, it is increasingly important that the seagoing Navyman in a position of responsibility develop an understanding not only of the words, but their significance in the sea service.

Hydrodynamics, for example, is now a familiar word. It is the study of the behavior of fluids in motion. But ***magnetohydrodynamics*** is a new field and has nothing to do, as the name might imply, with water-driven ignition systems. It is the study of the behavior of ionized gases (fluids) in the presence of magnetic fields. It is of great practical importance to the understanding of what is happening in the rarefied regions of the earth's upper atmosphere where rockets and space vehicles are now penetrating.

Of even greater importance, the key to harnessing the fusion energy of the hydrogen bomb lies buried, awaiting development of a full understanding of magnetohydrodynamic processes. The theory of ***plasma jets,*** an outgrowth of magnetohydrodynamics, has been put to practical use in metal spray devices and may find further application in space propulsion.

Entropy, another new word to most of us, is recognized by every steam engineer as a term from ***thermodynamics*** that relates to "a measure of the available energy in a thermal system." A new use for the concept of entropy has been found by the communications engineer.

As unlikely as it seems, entropy is now used as a measure of information in communication system design. The parallel use of the term results from the almost identical mathematical form of the equations in thermodynamics and in the growing study called ***"information theory."***

In analyzing information the development of a mathematical treatment is of great practical importance in developing automatic control systems, data reduction and storage, and communications. Information theory indicates, for instance, that all the information now stored in the Library of Congress could be reduced—by proper coding—to occupy a storage space of less than one cubic yard.

All Navy Cartoon Contest
Billups E. Lodge, LT, USN

"Did you hear that SOS, Sir?"

Furthermore, all the information so stored on any subject could be made instantly available by access through data processing systems. You can see that the potentialities of information theory are of great interest to the Navy. It would have use in the rapid handling of the great quantities of information and data that develop in naval operations, where large numbers of ships and aircraft are involved, and in employing guided missiles. There is great interest in this field.

Numerous examples could be given of the increasing practical importance of the naval officer keeping abreast of the latest advances in the theoretical sciences. Further examples would merely strengthen the realization that every new development in the pure sciences, from ***"solid state physics"*** to the mathematics of ***"non-linear partial differential equations,"*** has a practical application to naval warfare.

David J. Majchrzak, DN, USN

"I'm using psychology."

So overwhelming is the impact of the modern technical revolution, it is no longer adequate that only a small number of officers destined for restricted duty pursue advanced study.

As recent statements by SecNav, CNO, the Chief of Naval Personnel and a number of commanders in the Fleet indicate, there is great need that more officers on duty in the Fleet have a thorough grasp and understanding of the basic principles involved in the new technological developments.

And not only at the officer level is this necessary. In recognition of the importance of advanced formal education, the Chief of Naval Personnel has instituted, at the direction of SecNav, a program to send a substantial number of enlisted men through college to enable them to meet the increasingly complex technical demands of a naval career.

The Engineering School, as a component of the Postgraduate School, is the direct lineal descendent of the old Postgraduate School which had its beginning in Annapolis in 1909. In this component, the eight departments of aerology, aeronautics, electrical engineering, engineering electronics, mathematics, physics, metallurgy and chemistry, and mechanical engineering teach courses in 32 curricula ranging from basic aerology to special mathematics.

These 32 curricula are grouped generally into five areas, each under the charge of a senior officer who is well experienced in that field. The curricula are precisely tailored to provide the kind of education needed by the Navy for the officers who man the Fleet. This ability to meet an exact educational requirement has led to the expansion of the Engineering School to more than 600 students with a faculty of more than 100 professors in every engineering field.

Under the impetus of the "Space Age," and with the growing realization that the key to technological supremacy lies in having a solid core of naval officers well educated in the engineering sciences, the Engineering School is destined to expand further to a full capacity of 800 student officers, to meet new needs.

The *U. S. Naval Postgraduate School Catalogue* (for Academic Year 1959-1960) which is widely distributed to major units and commands ashore and afloat, contains a detailed description of the curricula and the courses which constitute them. No matter what your individual professional interests may be, there is a curriculum especially designed to give you a thorough engineering foundation to a naval career in that area.

To further the trend away from education exclusively for the engineering or special duty specialist toward a new orientation of an engineering education for the seagoing line officer, several curricula have been revamped in accordance with directives of the Chief of Naval Operations and Chief of Naval Personnel.

With few exceptions, study is designed for utmost utility to the operating officer, and previous requirements for transfer to engineering duty assignment have been removed.

Applications are being received by the Chief of Naval Personnel in larger numbers than ever before. The word is out that a postgraduate education is the order of the day for those officers who are carefully studying their career futures. The deadline is 1 Nov 1959 for applications to be considered by the selection boards. Don't miss out, but study the prospects carefully. Then send in your application for the postgraduate curriculum that interests you most.

The foregoing information was sent to us by RADM E. E. Yeomans, USN, *Superintendent of the U. S. Naval Postgraduate School at Monterey, California. We present it not only as information for career officers and career senior petty officers, but as an indication that this Navy of yours is moving—and moving fast—in the technical fields.*—ED.

WAY BACK WHEN

PGS—And How It Grew

This year the U. S. Naval Postgraduate School, which started out as a School of Marine Engineering at Annapolis with an enrollment of only 10 officers, is celebrating its 50th anniversary.

Today this institution has some 1100 officer students enrolled in about 40 different curricula in engineering and related subjects in the Engineering, General Line and Naval Science and Management Schools. And, facilities are being planned to accommodate a total of 1475 officer students—775 in the Engineering School, 50 in the Navy Management School and 650 in the General Line and Naval Science School. At its commencement exercises this May the school conferred for the first time, the degree of Doctor of Philosophy.

The idea of a naval graduate school began with the establishment of a course of instruction in Marine Engineering by the Bureau of Engineering in 1904. The results of this move were so encouraging that in 1909 the Secretary of the Navy established a School of Marine Engineering at the Naval Academy.

In 1912 the School of Marine Engineering became the USNA Postgraduate Department, and its academic program was broadened to include Ordnance, Naval Construction and Civil Engineering. During World War I the Department suspended operations, but classes were resumed in 1919 in converted Marine barracks on the Naval Academy grounds. Two years later the facility was officially designated the "United States Naval Postgraduate School."

In the 1920s and '30s the school continued to grow, both in enrollment and in the number of courses offered. In 1927 the General Line Course was initiated to acquaint junior line officers with the latest developments taking place in the Navy, and to broaden their professional knowledge through integrated programs of study in naval science.

World War II caused an increase in enrollment in the engineering curriculum from about 125 to more than 600 students. In contrast to the complete suspension of operations that took place in the first World War, there was a great expansion of activity. The school outgrew its quarters, and an annex was built to house additional classrooms and laboratories. Even so, there was still a serious shortage of space.

After the war ended a program was begun to relocate the PG School and improve its professional status. Between 1945 and 1948 legislation was passed to establish the school as a separate activity under its own superintendent; create the office of Academic Dean; grant the superintendent the right to award bachelor's, master's and doctor's degrees; and locate the school at Monterey, Calif.

The move to Monterey was started in 1948 and completed in 1951.

In 1956 the Navy Management School was established as a component of the PG School. Its mission is to educate officers in the application of sound scientific management practices to the complex organizational structure and operations of the Navy. In 1958 the General Line School was redesignated the Genral Line and Naval Science School, and a bachelor of science curriculum was offered to meet the educational and career requirements of selected officers who do not have baccalaureates.

These are just a few of the changes the PG School has seen in its first half-century. However, despite the passage of many years, the school has still kept its original objective in view—that of providing the Navy with officers who have the advanced technical education it takes to administer and direct a modern Navy.

Nuclear Submarine Crew Is In Deep Water, But Going Far

USS *Sargo*, SS (N) 583, has been operating less than a year, but in that short time both she and her crew have been busy.

First nuclear submarine built on the west coast, *Sargo* was commissioned in October 1958. Since then 118 officers and men have served in her at one time or another. More than 85 per cent have been promoted, advanced in rate, accepted in the OCS, NROTC or NESEP/NEASP programs, or have received proficiency pay.

A run down shows two officers promoted to commander and three to lieutenant commander. Eleven enlisted men were appointed ensign, and four to warrant grade. Two were accepted for OCS, four for NESEP/NEASP and one for NROTC.

Two CPOs were advanced to E-9, and two to E-8. Thirteen first class POs made chief, and 18 second class, seven third class and eight seamen and firemen all moved up one rate. A total of 24 men received propay.

PGS Offers a Full Line of Courses for the Naval Officer

ADVANCED EDUCATION is available to qualified naval officers on active duty through the Navy's Postgraduate Educational Program. This schooling is provided at the Engineering and Navy Management Schools of the Naval Postgraduate School, Monterey, Calif.; at the Naval Intelligence School, Washington, D.C.; and at certain civilian educational institutions.

Each year commissioned officers are invited to apply for this special training. Deadline for submission of this year's applications is 1 Nov 1959. The selection board should meet in January 1960 with classes to begin during fiscal year 1961.

Eligible officers may apply in any one of seven postgraduate educational areas. These are aeronautical engineering; civil engineering; management; administration; naval engineering; operations; ordnance engineering; and a "Special" category. Within the chosen areas, officers are asked to list all curricula in which they are interested and qualified.

Postgraduate courses last from 10 months to three years. All line officers selected and ordered to the technical engineering curricula at Monterey — specifically, Aeronautical, Electronics, Naval and Ordnance Engineering — will be initially assigned to a two-year general curriculum.

Advanced studies after the two years are available within quotas authorized by CNP if the candidate is recommended by the Superintendent of the Naval Postgraduate School, and approved by the Chief of Naval Personnel. Generally, Reserve officers (unless they are in the process of, or have completed action toward augmentation as USN) are limited to the two-year course.

Before any officer is selected for postgraduate education he must agree to remain on active duty during the curriculum, and to serve on active duty in the Navy for at least one year after he completes his studies. This obligation is in addition to any other service obligation he may have already incurred.

This schooling is considered shore duty, and should fit into the normal rotation of an officer. A line officer is not made available for selection if assignment ashore at the time of his request would be against his best career interests.

After completing postgraduate education, line officers can expect to be assigned to sea duty—unless they have been selected for transfer to a restricted line category. Staff corps officers will be assigned to billets which should broaden their experience in their career field. Generally speaking, all officers can expect two tours of duty associated with their studies—one ashore and one afloat.

Certain eligibility criteria and prerequisites have been established. Here are some general ones:

- For curricula under the areas of aeronautical engineering, naval engineering (except naval construction and engineering), operations and ordnance engineering, officers must have been first commissioned on or before 30 Jun 1957 (subject to the below-stated operational experience), and may be up to, and in some instances, in the grade of LCDR with a date of rank as LCDR of 1 Jan 1959 or later.
- For curricula under the areas of Management, Administration and "Special," officers must have been commissioned on or before 31 Jun 1955, and may be up to, and in some instances, in, the grade of CDR (once again with the below-stated experience).

Before a surface line officer is eligible for any postgraduate curriculum, he must be ready to begin a normal tour of shore duty, or be able to continue a shore tour which will not exceed three years at the end of the requested course.

Submarine officers must have at least three years' operational experience in submarines as of 1 Jul 1960 to be eligible this year. For the Naval Construction and Engineering curriculum, however, submarine officers need to be qualified only in submarines before commencing the course. They must also be eligible for a normal tour of shore duty, or to continue a shore tour which will not exceed three years.

For any curriculum requested by a naval aviator, he must have at least three years' flight operational experience with Fleet squadrons, as of 1 Jul 1960. He also must be eligible for a normal tour of shore duty, or be able to continue a shore tour which will not exceed four years upon completion of his course.

Officers who have already completed some previous postgraduate work may be eligible for additional study. Courses that may be taken by these officers (with the exception of Code 3100 officers) include: civil engineering (advanced), comptrollership, management and industrial engineering, metallurgy (special), naval architecture, (advanced hydrographics), Navy management and nuclear engineering (advanced).

Officers may have completed the General Line and Naval Science School curriculum and still be eligible for additional postgraduate work. Those officers who have completed the naval intelligence curriculum may apply for the social science curriculum.

Any previous postgraduate course completed by a code 3100 officer, automatically disqualifies him from further postgraduate education.

Code 5100 officers may apply for the nuclear engineering (effects) curriculum even though they have completed the civil engineering (Qualifications) curriculum. Any other postgraduate courses disqualify these officers for further postgraduate work.

Any line officer who applies for training in nuclear engineering (advanced), must request that his designation be changed to Engineering Duty (1400). Without further ap-

All Navy Cartoon Contest
P. H. Kalua, AA, USN

"Where have you been?! Your plane crashed an hour ago!!!"

plication, his designator will be automatically changed when the curriculum is successfully completed.

The entrance standards for the Postgraduate School at Monterey are about the same as those for leading civilian colleges which offer advanced graduate degrees in an engineering major. However, for the technical curricula at Monterey, except general meteorology, you need not actually have a bachelor of science degree if equivalent formal education has been received and if you have completed differential and integral calculus and one year of college-level physics. A course in engineering mechanics is desirable.

If selected officers want refresher courses, the Postgraduate School staff has developed one in mathematics that should take about 150 hours of work to complete. This is not mandatory, but is advisable not only as a refresher in math, but to reestablish study habits. Other refresher courses in mechanics and physics are also obtainable from the school. If one or more of these courses are desired, they should be requested as part of your postgraduate application, or by a separate request to the Superintendent.

With one or two exceptions, civilian institutions that offer postgraduate work under the Navy's postgraduate program require a bachelor's degree for admission.

LDOs may apply for postgraduate work if the curriculum requested is appropriate to the officer's specialty, and if he has the necessary formal educational background. In all cases, however, LDOs must compete with line officers for postgraduate quotas.

Women officers (USN and USNR on active duty) who were commissioned during calendar years 1942-1955, inclusive, may apply for:

Business administration — USN; communications engineering — USN and USNR; comptroller—USN; personnel administration and training—USN; meteorology (advanced and general) — USN and USNR; naval intelligence—USN and USNR; Navy management—USN.

Medical Service Corps officers are eligible for some postgraduate work. BuMed Instructions in the 1520.12 series give complete information.

Details about particular courses are listed in enclosure one to BuPers Notice 1520 of 22 May 1959.

Latest List of Motion Pictures Scheduled for Distribution To Ships and Overseas Bases

The latest list of 16-mm. feature movies available from the Navy Motion Picture Service, Bldg. 311, Naval Base, Brooklyn 1, N. Y., is published here for the convenience of ships and overseas bases. The title of each picture is followed by the program number.

Those in color are designated by (C) and those in wide-screen processes by (WS). Distribution began in July 1959.

Gidget (1335) (C) (WS): Comedy; Sandra Dee, James Darren.

Never Steal Anything Small (1336) (C) (WS): Comedy; James Cagney, Shirley Jones.

Alaska Passage (1337) (WS): Melodrama; Bill Williams Nora Hayden.

The Black Orchid (1338): Drama; Sophia Loren, Anthony Quinn.

Count Your Blessings (1339) (C) (WS): Comedy Drama; Deborah Kerr, Rossano Brazzi.

The Angry Hills (1340) (WS): Drama; Robert Mitchum, Stanley Baker.

The Shaggy Dog (1341): Comedy; Fred MacMurray, Jean Hagen.

The Trap (1342) (C): Melodrama; Richard Widmark, Tina Louise.

The Naked Maja (1343) (C) (WS); Drama; Ava Gardner, Anthony Franciosa.

The Little Savage (1344) (WS): Melodrama; Pedro Armendariz, Christine Martel.

The Buccaneer (1345) (C); Drama; Yul Brynner, Claire Bloom.

Alias Jesse James (1346) (C): Comedy; Bob Hope, Rhonda Fleming.

The Ten Commandments (1347) (C): Drama-Biblical; Charlton Heston, Anne Baxter.

The Beat Generation (1348) (WS): Drama; Steve Cochran, Mamie Van Doran.

Battle Flame (1349): Melodrama; Scott Brady, Elaine Edwards.

Imitation of Life (1350) (C): Drama; Lana Turner, John Gavin.

NOW HERE'S THIS

Neon Detectors

Legend has it that the fall of an apple from a tree led Sir Isaac Newton to discover the law of universal gravitation. A more recent accident has led LT Walter Johnson of the Navy's Medical Corps to another important discovery.

One day, while using elaborate detectors to measure microwave radiation aboard USS *Galveston* (CLG 3), Dr. Johnson felt something burning him. The seat of his trouble turned out to be a couple of flashbulb-size neon lamps he happened to be carrying in his hip pocket. Without any visible connections the lamps had glowed and heated up when the doctor got in the way of radar waves.

As a result the Navy now has a cheap and effective way to protect its men from overexposure to high-energy radar beams.

On board *Galveston* and other ships with similar electronic gear, each crew member now wears a little neon lamp on his uniform. When the lamp lights up the wearer knows he is in a radar beam, so he can avoid exposure simply by moving aside until the lamp goes out.

The bulbs are just the right size to light up well before the danger point is reached.

Technicolor Extinguisher

A new chemical agent, which puts out gasoline and oil fires in half the time required with other substances, has been developed by the Naval Research Laboratory.

Called "Purple K Powder" after the cool lavender color it gives off while putting out a fire, it consists of finely powdered potassium bicarbonate. In aircraft crashes, where speed is essential in rescue operations and the control of gasoline blazes, it should prove especially useful.

The new agent can be used in conventional fire extinguishers and in the Navy's forthcoming "Air Lift" fire extinguisher, which can be carried by helicopter and let down quickly at the scene of a fire.

The development of Purple K Powder is part of a 20-year program of fire research at NRL.

Roundup on Courses for the Navyman Who Thinks Nucleonic

IF YOU'RE NOW WORKING in nuclear weapons or interested in entering that field, you may be able to qualify for one of nine different training courses currently being conducted by the Field Command, Defense Atomic Support Agency.

Information on all courses, including detailed descriptions and convening and reporting dates, is contained in BuPers Notice 1540.

Courses being offered are:

• ***Nuclear Weaponsman, Class "A," Phase II***—A 12-week course aimed at training enlisted men and selected civilians to assemble, disassemble, package, store, inspect, test and maintain nuclear weapons.

Applicants must have a minimum MECH/ARI of 105 and must have completed the eight-week NW, Class "A," Phase I course at NTC Great Lakes or have an equivalent background.

Normal military input to the course is from recruits who have completed Phase I at NTC Great Lakes. A limited number of quotas is available to the field for both phases or for Phase II only.

Requests from military personnel for Phase II must certify a background in electricity comparable to that provided by Phase I. A SECRET security clearance is required.

• ***Nuclear Weapons Officers Course***—Of five weeks' duration, and requiring a TOP SECRET security clearance, this course is designed to familiarize selected officers and civilians with the technical administration and operations of Navy nuclear weapons activities.

• ***Nuclear Weapons Assembly Supervisor Course***—Eight weeks in length, this course has been set up to train selected officers, warrant officers and civilians in the supervision of assembly and maintenance of nuclear weapons, and in the technical administration of Navy nuclear weapons activities. A TOP SECRET security clearance is required.

• ***Nuclear Weapons Indoctrination Course***—This is a two-week course, requiring SECRET clearance, which indoctrinates selected officers, enlisted men and civilians, in the basic types, principles of operation and major components of nuclear weapons, plus associated safety hazards.

• ***Nuclear Components Course***—A four-week period of instruction designed to train selected officers and enlisted men in the handling, inspection, storage, packaging and transportation of the nuclear components of nuclear weapons. This includes becoming familiar with the hazards involved, necessary safety measures and the use of associated radiac equipment.

TOP SECRET clearance is required. Officers must have completed the NWO or NWAS course or have had equivalent formal training. Enlisted men must have completed the NW course or have had equivalent formal training, and have a minimum GCT/ARI of 110. ETs and ATs may be enrolled upon completion of the WI course.

• ***Nuclear Components Refresher Course***—A four-day course aimed at bringing nuclear personnel up-to-date on the latest developments in nuclear components, and re-orientating them on procedures in the handling, inspection and maintenance of nuclear components.

Applicants must be graduates of the NU course, and have TOP SECRET clearance.

• ***Nuclear Weapons Electronics Repair***—13 weeks of training for selected enlisted men and civilians in circuitry of nuclear wepons, testing, maintenance, repair and calibration of radars, radiac and test equipment, and the use of calibration equipment.

Applicants must have completed the WI, NW, ATN or NWAS course. SECRET clearance and GCT/ARI of at least 110 are required. Applicants other than ETs or ATs must have a background in electronics including formal training.

• ***Nuclear Weapons Employment Familiarization Course***—A two-week course set up to familiarize senior officers with the effects of nuclear weapons and the problems associated with their employment.

It is designed for senior officers in command or staff billets who have a need for general knowledge of the technical and logistic factors affecting the use of atomic weapons.

TOP SECRET clearance is a requirement.

• ***Nuclear Weapons Orientation Advanced Course***—A five-day course designed to acquaint senior officers and selected key DOD civilians with the nuclear weapons program.

It is aimed at senior officers and carefully selected civilians of equivalent grade (GS-13 or above) who by virtue of their assignments actually occupy positions requiring a tri-service approach to the nuclear weapons program. Students will be selected for this training on a need-to-know basis.

Clearance requirement is TOP SECRET.

Persons selected for instruction in these courses will be ordered to the Defense Atomic Support Agency, Sandia Base, Albuquerque, N. M.

Nuclear Power Training Programs Want Volunteers

The Navy wants volunteers in certain ratings and pay grades for three different nuclear-power training programs.

They are the nuclear-powered submarine program, nuclear-powered ship program and the Army package-power reactor program.

Submarine personnel of HM ratings in pay grades E-6 and E-7 and the ratings of MM, EN, ET, EM and IC in pay grades E-3 through E-7, plus surface ship personnel of the HM rating in pay grades E-6 and E-7, and the ratings MM, BT, SF, MR, ET, IC, EM and EN in pay grades E-3 through E-7 are all eligible for any one of the programs.

Construction group UT and CE ratings may also apply, and will be picked for training according to the needs of the Navy.

Both Navy courses are conducted in parts at New London, Conn.; Mare Island Naval Shipyard, Vallejo, Calif.; Idaho Falls, Idaho; Schenectady, N. Y., and Windsor, Conn.

If you volunteer and are accepted for the Army package-power reactor program, you'll study at Fort Belvoir, Va., where the Army conducts the course under the auspices of the Atomic Energy Commission. The Navy participates in this program by invitation.

BuPers Inst. 1540.33B outlines requirements for volunteers, and emphasizes the advantages of entering this new and expanding field.

DIRECTIVES IN BRIEF

This listing is intended to serve only for general information and as an index of current Alnavs and NavActs as well as current BuPers Instructions, BuPers Notices, and SecNav Instructions that apply to most ships and stations. Many instructions and notices are not of general interest and hence will not be carried in this section. Since BuPers Notices are arranged according to their group number and have no consecutive number within the group, their date of issue is included also for identification purposes. Personnel interested in specific directives should consult Alnavs, NavActs, Instructions and Notices for complete details before taking action.

Alnavs apply to all Navy and Marine Corps commands: NavActs apply to all Navy commands; BuPers Instructions and Notices apply to all ships and stations.

The directives listed here cover a two-month period.

BuPers Instructions

No. 1120.12G—Outlines eligibility requirements and processing procedures for the Regular Navy Augmentation Program.

No. 1306.62A Ch-2—Distributes an extensive revision of BuPers Inst. 1306.62A, concerning Sea/Shore rotation of enlisted personnel.

No. 1430.11A—Provides information on advancement to pay grades E-8 and E-9.

No. 1500.25E, Sup 1—Gives convening dates for classes in calendar year 1960 at training activities under the management of the Chief of Naval Personnel and certain schools of other services for which the Chief of Naval Personnel fills quotas.

No. 1500.39A—Contains instructions on the use of the *Catalog of U. S. Naval Training Activities and Courses* (NavPers 91769-D).

No. 1510.69D—Outlines eligibility requirements and application procedures for the Navy Enlisted Scientific Education Program (NESEP).

No. 1540.33B—Covers the Nuclear-Power Training Program and application for it.

No. 1560.2A — Concerns the Navy's part in the President's People-to-People Program.

No. 1640.5A—Designates places of confinement for naval courts-martial prisoners.

No. 5521.2C—Revises and clarifies administrative requirements and procedures concerning eligibility for security clearance.

No. 5601.1A—Revises publications allowance list for individual ship classes, aircraft squadrons and staffs.

Cartoon by Barringer

"Maybe it was just a drill!"

No. 1120.18F—Outlines the eligibility requirements and processing procedures whereby USN personnel may seek appointment to commissioned status in either the Integration or Limited Duty Officer programs.

No. 1321.2C—Discusses policies and procedures for the issuance of temporary additional duty orders which involve travel of officers and midshipmen.

No. 1520.27A — Announces the program of language instruction at the U. S. Naval Intelligence School, Washington, D. C.

No. 1520.70A—Provides information concerning courses in communications conducted by the U. S. Naval School, Communications, Newport, R. I.

No. 1760.16 — Provides supplemental information concerning reemployment rights of benefit to all naval personnel being separated or released to inactive duty.

SecNav Instructions

No. 5430.1B—Defines the term, "Executive Office of the Secretary (EXOS)."

No. 5710.12—Reemphasizes the importance of the President's People-to-People Program.

SecNav Notes

No. 1421 (22 July)—Announced approval by the President of the report of a selection board that recommended line officers for temporary promotion to the grade of rear admiral.

No. 1421 (24 July)—Announced approval by the President of the report of a selection board that recommended Marine Corps officers for temporary promotion to the grade of brigadier general.

No. 1421 (27 July)—Announced approval by the President of reports of selection boards that recommended USN staff officers for temporary promotion to the grade of rear admiral in the Medical Corps, Supply Corps and Civil Engineer Corps.

BuPers Notices

No. 1520 (22 May)—Announced eligibility requirements and application procedures for officers to enter the Postgraduate Educational Program in Fiscal Year 1961.

No. 1520 (29 May)—Covered a program of professional seminars for active-duty chaplains.

No. 1540 (29 May)—Requested volunteers for enlisted basic submarine school to fulfill the personnel requirements of the Nuclear-Power Training and Fleet Ballistic Missile Programs.

No. 4600 (4 June)—Called for a concentrated and continuing effort to reduce the expenditure of funds for permanent change of station travel.

No. 1540 (9 June)—Provided information on nuclear weapons training courses conducted by the Special Weapons Training Group, Field Command, Defense Atomic Support Agency (formerly the Armed Forces Special Weapons Project).

No. 1440 (1 July)—Established procedures for effecting changes in the Engineman (EN) and Torpedoman's Mate (TM) rating structures.

No. 1300 (7 July)—Announced the effective date of the *Enlisted Transfer Manual* and cancelled certain relevant instructions.

No. 1223 (14 July)—Discussed a revision in the Navy enlisted rating structure concept.

No. 1120 (15 July)—Announced the selection of personnel recommended for appointment to the permanent grade of ensign, Medical Service Corps, USN.

No. 1120 (17 July)—Invited applications for appointment to commissioned status under the Integration and LDO programs.

No. 1020 (21 July) — Implemented a revised edition of *U. S. Navy Uniform Regulations* and certain additional changes in uniforms and insignia.

No. 7220 (21 July)—Brought to the attention of commanding officers the need to justify advances in pay to enlisted personnel being detached on permanent change of station.

Speaking of Canals, This Brings Us Up to Date on Panama C. Z.

Tropical living with practically all the Stateside conveniences — that's what you can look forward to during a tour of duty in the Panama Canal Zone.

The Canal Zone is a tiny strip of land about in the middle of the Republic of Panama. It stretches from the Atlantic to the Pacific Ocean, a distance of about 50 miles, and is only 10 miles wide—five miles on either side of the Canal. It runs almost north-south, since the Atlantic entrance to the Canal is north and slightly west of the Pacific entrance. At the Atlantic entrance are the two cities of Cristobal, in the Canal Zone, and Colon, in the Republic of Panama. At the Pacific entrance are Balboa, in the Canal Zone, and Panama City, which is the capital of the Republic of Panama.

The Canal Zone is an area granted in perpetuity by the Republic of Panama to the United States for the construction, operation, maintenance and protection of the Canal. By terms of the Treaty between the United States and Panama, the United States has complete and exclusive sovereignty in the Canal Zone.

The population of the zone is composed mainly of personnel of the Panama Canal Company, the Canal Zone Government, the Army, Navy, Marines and Air Force, and their families.

The climate of the Isthmus of Panama is typically tropical, with high humidity and relatively high, but even, temperatures throughout the year. There are two seasons—dry from January to April and rainy from May to the end of December. The dry season is tempered with trade winds which blow almost constantly throughout the four-month period. Temperatures vary little throughout the year, the means ranging from 73 to 87 degrees on the Pacific side and from 73 to 85 degrees on the Atlantic side. Extreme temperatures on the Pacific side are 63 degrees in January or February and 97 degrees in April. The Atlantic extremes are 66 and 95 degrees, occurring in the same months as the Pacific extremes. The rainfall varies greatly between the two sides of the Isthmus. The average annual precipitation on the Atlantic side is 130 inches while on the Pacific side the annual rainfall is only 68 inches. On the whole, the climate is pleasant with cool evenings throughout the year.

Entry into the Canal Zone—All personnel of the Naval Establishment are required to have permission for their dependents to enter the Canal Zone (Fifteenth Naval District) whether entry is for establishing residence or to visit. Dependents should not begin to travel to the area until this permission has been granted. Upon receipt of orders to duty in the Canal Zone, Navymen who want their dependents to accompany them should submit a request to Com 15. Permission for entry of dependents will normally be approved if quarters are available.

Immunization — These immunizations must be completed by dependents before the commencement of travel to the Canal Zone:

- Smallpox, Typhoid, Combined Triple—For everyone over one year of age: within the past 12 months.
- Diphtheria — For children between 6 months and 10 years: within the past 3 years.
- Tetanus — For everyone, one year of age or older: within the past 12 months.
- Yellow Fever — For everyone over 6 months of age: within the past 6 years.

Travel—Navy Department policy prohibits the travel by MSTS of women who are pregnant beyond the sixth month, or travel by MATS beyond the seventh month. A signed statement of a Navy medical officer or a reputable civilian physician attesting to the duration of pregnancy must be forwarded to the officer processing the original travel application. The traveler should carry a signed duplicate copy of this statement.

Commercial transportation is available to and from the Canal Zone by major airlines, via Tocumen Airport in the Republic of Panama.

Housing—Naval housing in the Canal Zone is adequate.

Since well ventilated houses are essential for comfortable living in the tropics, most quarters somewhat resemble "summer type" dwellings in the United States. All open areas are screened, but most are without window glass. Although this type of construction is well suited to this locality, the new arrival will find that his privacy has been somewhat reduced.

Household Effects—Most government quarters are adequately furnished with the prescribed allowance of furniture, including stoves and refrigerators. Since many types of wood deteriorate in the tropics, and free circulation of air is essential to proper heat control, specially designed furniture is used to meet these two problems. It is not advisable to ship to the Canal Zone such items as overstuffed chairs, studio couches or large expensive musical instruments. Books are prey to mildew, and since good libraries are available, only those books felt necessary should be brought. You will enjoy throw rugs for bedrooms or a small cocktail rug for the living room if you have them, and your own pet pictures and wall decorations will make your quarters look like home. But, remember that mildew and termites are problems in the tropics before you decide to bring any expensive items—including good pictures and hangings. (Extra lamps may be enjoyed but are not necessary.)

Excellent silverware, chinaware and table linens are available in Panama and the Canal Zone at prices lower than those in the United States, in case you don't have your

All Navy Cartoon Contest
David J. Majchrzak, DN

"No little ensign is telling me how to run my deck crew . . ."

own. A kit consisting of the bare essentials of bed linens, towels, dishes, silverware and cooking utensils will be placed in your quarters by your sponsor. (See below.) The kit may be retained by you until your household effects arrive.

Electricity—Conversion to 60 cycles is being completed, so bring along the appliances you used in the United States.

The local Armed Forces Radio and Television Service is in operation, so bring your television set to the Canal Zone.

Sponsors—There is a sponsorship program in effect throughout the Fifteenth Naval District. Under the program, your sponsor is assigned by your new Commanding Officer and will write you giving any additional information that you may need. Your sponsor will also ready your quarters for your occupancy, including the purchase of immediate food needs, and meet you upon arrival in the Canal Zone.

Automobiles—An automobile is almost a necessity, since public transportation is inadequate. The climate is hard on cars, so it is best not to buy a new car to bring to the Isthmus. Instead, be sure the car you have is in good operating condition (and undercoated) before you leave the States. At the present time tires, batteries and accessories can be bought reasonably at Panama Canal commissaries and also at Army, Navy and Air Force exchange garages. Mechanical repairs are slow and expensive. New automobiles can be purchased from dealers in Panama City at a cost approximately the same as in New York City. Gasoline costs about 20 cents per gallon in the Canal Zone. It is recommended that you start making arrangements with the Naval Supply Depot, Bayonne, N. J., for transportation of your car as soon as practicable. You may be able to arrange to have your car aboard the same transport in which you and your dependents will travel. Canal Zone license plates cost $5.00 per year with half rates available after 1 July.

A Canal Zone driver's license is required in the Zone, and you'll need one from the Republic of Panama for driving in or through the Republic. In most cases, where a driver has a permit to drive from the state of his last residence, only a written examination is required for the Canal Zone license. The Republic of Panama permit is issued contingent upon this test.

It is advisable before leaving the States to make certain your automobile insurance will cover you while driving in the Republic of Panama. If your present policy does not cover you, your company may write an additional clause into the policy. This coverage is necessary

HOW DID IT START

North Atlantic Guardian

The U. S. Naval Station at Argentia, Newfoundland, calls itself the "Guardian of the North Atlantic"—and rightly so.

As a continental terminus of the Atlantic Airborne Early Warning Barrier, it is a key outpost in our defenses against surprise attack. Located about one-third of the way across the ocean, along the main great circle routes from North America to Europe, it gives the Free World a strategic sweep of the North Atlantic and the busy shipping lanes that span it.

Argentia grew up the hard way, for it came into being in a tense period when there was little time for advanced planning. Rights were extended to the U. S. to establish a base in an agreement made in 1940 and formally signed in March 1941. A detachment of Marines had been in the area since 25 January of '41, and the United States flag was raised there the following month. In July, a Naval Operating Base and Naval Air Station were officially established. They were in full operation by the end of the year.

From Argentia, Navy aircraft flew round-the-clock missions to seek out and destroy German U-boats. The pilot of one of these planes radioed the famous message, "Sighted sub—sank same." Argentia was also a center of activity for American and Allied warships on convoy and escort duty. Here, at the western "turn-around" point, the men-o'-war refueled, took on supplies, were briefed on tactics and operations and formed their groups to take over the convoys from the United States. Thousands of tons of shipping were safely shepherded through sub-infested waters by ships from Newfoundland ports.

Planes from an Argentia-based patrol squadron in March 1942 sank the first two U-boats sunk by U. S. forces in World War II.

In addition, the naval base was important to the U. S. Army forces stationed in Newfoundland. Since Argentia is the only deep-water harbor on the island to remain ice-free throughout the year, it became the point of discharge for cargo vessels and tankers carrying fuel and provisions to the Army. Throughout the war hundreds of railroad tank cars, box cars and refrigerator cars moved from Argentia to the large Army and Army Air Forces installations in Newfoundland.

After V-E Day there was an immense redeployment of American forces, and air traffic returning from the European theater was very heavy. The most traveled airlanes across the North Atlantic came via Newfoundland, and ships based at Argentia fanned out in air-sea rescue task groups to guard the seas and save lives when planes were forced down at sea.

In the post-war period patrol squadrons continued to operate from Argentia. So did Coast Guard air surveillance planes and aircraft of the International Ice Patrol. At the same time, Argentia remained a primary transient stop for military air transport traffic across the North Atlantic.

In late 1952, when the Joint Chiefs of Staff directed the establishment of the Mid-Canadian Early Warning Line, Argentia took on its present role as part of the Atlantic Airborne Early Warning Barrier. This major change in the station's mission led to considerable expansion.

In July 1955 the Navy was given control of McAndrew Air Force base, near the naval station. This additional area about doubled the size of the naval installation, which now covers almost 9000 acres of leased territory.

New hangars are being constructed, runways are being lengthened, a modern school for dependents is springing up and new housing facilities are being built. Plans for other construction projects have already been approved.

Argentia is near the site of Plaisance, a French fortress and settlement built in the 17th century.

Way back in the reign of Charles II (1660-85) the Privy Council of England remarked, "that place will allwayes belong to him that is superior at sea."

when applying for a military base car identification sticker.

Clothing—Clothes suitable for midsummer in the United States are right for Panama. In general, dress is informal but women may wear gloves, hats and stockings to luncheons, such as teas. Washable clothing is the most practical for everyday wear, since dry cleaning is rather costly and not always of the best quality. Women leading an active social life (senior officers' wives in particular) will need cocktail dresses and an evening gown. Woolens and furs should be left in the States, except for a few things in case one has the opportunity to visit neighboring high-altitude places. The humidity encourages mildew, especially on woolens, silks and leathers, which should be kept in specially heated closets in the quarters.

The Canal Zone commissaries and the Service Exchanges have clothing for the family at reasonable cost. Wider selections are available in the cities of Panama and Colon, but at higher prices than in the States. If your feet are hard to fit, it is wise to bring a supply of shoes with you.

For men, suits of tropical worsted, Palm Beach, linen, seersucker and especially the new wash-and-wear fabrics are popular for off-duty hours.

School children generally dress about like this:

- Grade School Girls — Cotton dresses (short sleeves or no sleeves).
- Grade School Boys—Jeans and open-collar shirts or T-shirts. Some boys do wear shorts.
- High School Students—Clothing as in the United States. Skirts and blouses for the girls—jeans for the boys.

Ladies—Please bring a long-sleeve shirt and long slacks for participation in DISTAFF. (See below.)

The Uniform of the Day for officers and chief petty officers is Tropical White, or Tropical White, long. One uniform of Service Dress Blue, one of Service Dress Khaki, and all of your Whites should be brought along. In addition, you should bring any working Khaki you may have, along with all items of the Tropical Working Uniform that are in your possession. All the items of Working Uniforms are available locally. Officers occasionally need the Dinner Dress White Uniform, which may be purchased locally in case you do not have one.

The Uniform of the Day for white-hats is Whites without jumpers or White or Khaki shorts. Slacks, shorts and sports shirt are worn more than any other items of civilian wear.

Disaster Control Organization—In the Panama area all of the armed forces cooperate in a unique and excellent system of disaster control Service wives are expected to participate actively in it through their organization called DISTAFF. All wives are automatically members of DISTAFF upon their arrival. First Aid Training is basic, so it's a good idea to take your First Aid course as soon as you arrive—even before your household effects come—when you will have more time. In addition to training you for mass disaster, it is a wonderful opportunity for training for ordinary home emergencies. Mothers especially will appreciate it.

Food—Panama Canal Company Commissaries, located in the various Canal Zone communities, are comparable to department stores and are operated under government control. Supplies of all kinds for personnel and home use may be bought. These Commissaries carry the usual foodstuffs, including cold storage products, meats, fruits, vegetables, cheese, butter, eggs and quick-frozen items. The food supply is plentiful, but lacking in variety, particularly fresh vegetables and fruits. Pasteurized milk is available. Canned foods are plentiful, including baby foods.

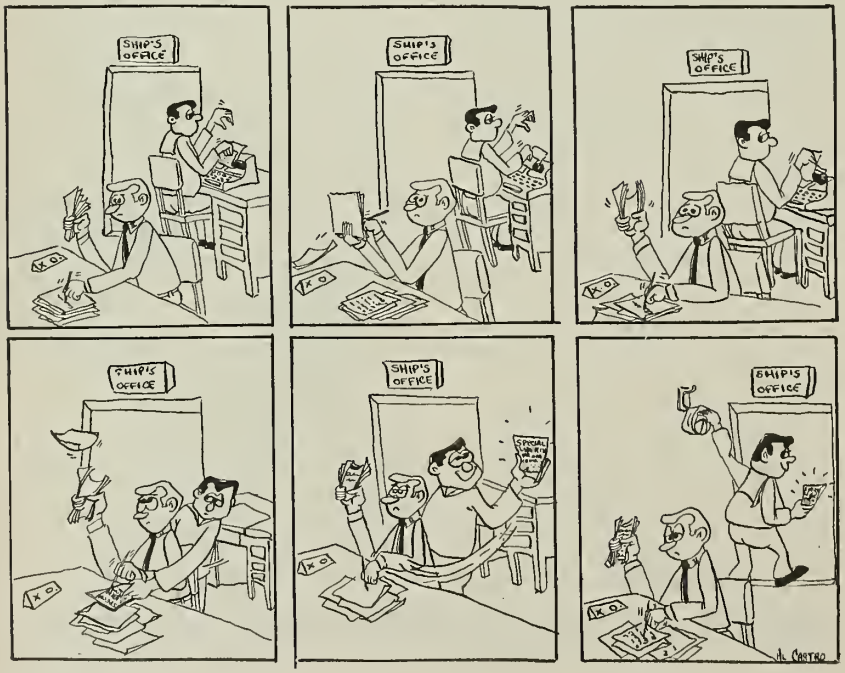
In addition to food, Panama Canal Company Commissaries stock clothing for men, women and children; hardware and household furnishings. The Commissaries and Exchanges also offer an excellent opportunity to purchase Irish linens and English China of well-known makes in limited supply. Special orders may be placed at the Exchanges.

The Commissaries have family *laundry* and *dry cleaning* service.

Army, Navy and Air Force Commissaries and Exchanges at the various installations offer services similar to those of the Panama Canal Company Commissaries and have *lunch* and *fountain service*. They carry an interesting stock of goods from Central and South America and foreign countries elsewhere. Navy Exchanges operate a *laundry* and have pick-up and delivery service.

Servants—Domestic servants are available at wages averaging from $20.00 to $50.00 per month. They may also be engaged on a daily basis for approximately $2.00 to $2.50 per day. There is a maid agency service available at the Army Post of Fort Clayton and a maid agency in Panama City. Otherwise, maids may be employed through newspaper advertisements and recommendations from residents. The supply is plentiful, although many are unskilled.

All Navy Cartoon Contest — **Alfred B. Castro, SA, USN**



EPDOPAC, A Hard-to-Beat Combo of Mechanical and Human Brainpower

The Enlisted Personnel Distribution Office, Pacific Fleet—better known as EPDOPAC—has set up a special presentation team to show the personnel people from PACFLT ships and stations how the Navy's distribution system operates.

Part of the team's job will be to dispel the notion that spark-spitting electronic personnel experts now push Navymen around as if they were coffee cups in an automat.

Actually, as the team points out, the "electronic monsters" are just very expensive, complex and efficient machines which supply information at a phenomenal rate to the good old-fashioned, human, distribution officer who still makes the decisions.

These fast-thinking machines, as team-mates of the human distributor, have promoted the individual Navyman from merely "a boatswain's mate who is to be transferred" to a personality with a career history, a family, a certain amount of sea duty, a certain amount of shore duty, certain desires for his next duty station, special qualifications and—in some cases—special problems which warrant consideration.

The very fact that EPDOPAC is manned by human beings—not cold and perfect machines—has made it subject to human error. The distributors at EPDOPAC do their best to consider the individual in each transfer that is directed. However, information is submitted to the distribution office in enormous quantities, so there are bound to be instances of failure to submit correct and complete data. This may cause a man to miss out on a duty assignment he wants.

Besides helping to clear up such situations, the presentation team explains new ideas and procedures which have been incorporated in the distribution system since EPDOPAC was established back on 1 Nov 1956. Without knowing about these changes it is sometimes difficult for commands and individuals to get the most out of the benefits which electronic data processing methods have made available to the Fleet.

The team made up of three leading CPOs, presents the EPDOPAC story in a one-day class which starts at 0830 each Wednesday. The presentation includes lectures on distribution procedures, a question-and-answer period and a tour of EPDOPAC and PAMIPAC. The lectures cover such subjects as the origin and purpose of EPDOPAC, the objectives of centralized distribution and the background and workings of Seavey-Shorvey and the Overseas Pacific Rotation Program.

To spread the presentation team's message as widely as possible, EPDOPAC invites and encourages PACFLT commanding officers to have their administrative and clerical personnel attend these sessions while in the San Diego area. The presentations are conducted at EPDOPAC, Building 252, NAS North Island.

Owing to a limited amount of space, reservations are required. They may be obtained by telephone in the San Diego area, or by writing Commanding Officer, EPDOPAC, San Diego 60, Calif.

Most servants are English-speaking or Spanish-speaking. Jamaican or Panamanian seamstresses can be located, some of whom will come to your home to do sewing if you have a machine. Laundresses are available at reasonable rates.

Medical Facilities — Dependent medical requirements are provided for by the Panama Canal Company. For those stationed at Atlantic-side activities, the Coco Solo Hospital is available. Hospital services on the Pacific side of the Isthmus are available at Gorgas Hospital.

Limited dental service for dependents is available. Treatment will normally consist of those procedures necessary for the maintenance of an already healthy mouth. It is therefore suggested that you have all necessary dental work done on your dependents' teeth before their (the dependents' not the teeth's) departure from the United States.

As a result of the constant vigilance of United States health authorities, the Canal Zone is singularly free from disease, and health conditions are excellent. The water in both Panama and the Canal Zone is pure.

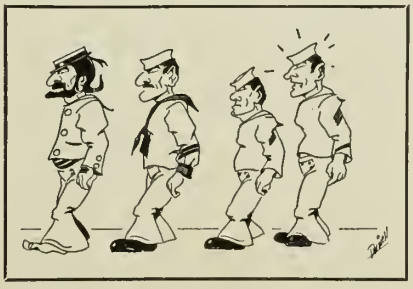
Education—The Canal Zone school system compares favorably with modern school systems in most cities of the United States. Excellent educational facilities are provided from kindergarten through junior college. Graduates of the two high schools have college entrance qualifications. The curriculum of the junior college is comparable to that of junior colleges in the United States. Tuition in the Canal Zone is free to dependent children of United States military personnel from kindergarten through the 12th grade. The school term commences the first week in September and ends the first week in June.

Night extension courses at the junior college at Balboa and at some Army posts are available. Courses include a variety of subjects. Excellent opportunities exist for study of the Spanish language. The YMCA and JWB also offer interesting courses in a variety of subjects.

Religion—Facilities for religious activities are plentiful. Service personnel and dependents may attend services at Army, Navy and Air Force installations, or at churches of the various denominations in the Canal Zone or Republic of Panama.

Money and Banking—The Panamanian unit of currency is the silver balboa, equivalent in value to the United States dollar. United States and Panamanian silver is interchangeable and is used in either the Canal Zone or the Republic of Panama. Since Panama prints no paper money, the dollar is legal tender throughout the Isthmus. There are no currency regulations, and the

All Navy Cartoon Contest
Cartoon by Dwinell



"I've stood in some slow chow lines in my life, but, this one . . ."

United States dollar may be imported and exported freely.

The Chase-Manhattan Bank and National City Bank of New York have branches in Balboa and Cristobal which handle all normal banking business. For cashing checks, drafts and the like payable in the United States, a charge of one-fourth of one per cent is made up to $500.00, with a minimum charge of 15 cents. For checks over $500.00 an exchange charge of one-eighth of one per cent is made, with a minimum charge of $1.25. Checks on Canal Zone banks are charged a similar exchange fee when cashed in the States. In order to avoid these charges some families prefer to keep a current checking account in a United States bank. The aforementioned banks do not credit interest on savings accounts.

Recreation—Swimming, golf, tennis and fishing are year-round sports, with the Bay of Panama providing some of the best game fishing in the world. Baseball, softball, bowling, track and range shooting are popular, as are riding and hunting. There is a full program of youth activities—Boy and Girl Scouts, Little League baseball and so forth.

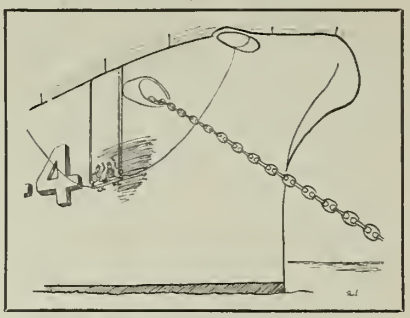
Trips to neighboring regions can be taken by car, plane or boat. You can travel at small cost and with little effort to the ruins of the old Spanish fort at San Lorenzo by the mouth of the Chagres River; to the San Blas Islands inhabited by the friendly Cuna Indians; to Taboga Island in the Pacific; and to picturesque villages in the interior.

Officers' Clubs are located at most Army, Navy and Air Force installations, and clubs for enlisted personnel and their families are available at the larger naval activities. Motion picture theaters are conveniently located at service installations, as well as in all Canal Zone townsites.

Societies—There is a branch of the Navy Relief Society at Balboa, and many well know fraternal organizations and benevolent societies have chapters or lodges in the Zone.

Beauty Shops—Good beauty shops are available. Commissaries and Exchanges carry cosmetics, but it is best to bring along a supply of your favorite brand, as there is only a small variety carried in the Canal Zone. A wider selection is available in Panama City.

All Navy Cartoon Contest
CDR Peter M. Lindsay, SC, USN



"With all the scientific breakthroughs nowadays, you'd think they could stop these buckets from rusting!"

Pets—Every dog or cat brought into the Canal Zone is held in quarantine for a period of four months. During the stay in quarantine the pet will be kept at the kennels in Corozal, Canal Zone, about 15 minutes driving time from Headquarters, Fifteenth Naval District, at a cost of fifty cents per day. Your pet should be inoculated for rabies before departure, and it will be necessary for you to obtain a statement from a veterinarian that your pets are healthy and free from disease before the pet will be taken aboard the transport. Remember, you must provide a crate for shipment of the animal to the Canal Zone.

Birth Documents—Naval dependents should have in their possession at all times a birth certificate (or affidavit in lieu thereof when birth records are non-existent) or some other documentary proof of citizenship. Such documents must be presented if application is made at a United States Embassy or Consulate for passports to visit Central or South American countries other than the Republic of Panama. Birth documents and marriage certificates must be presented when registering the birth of children born in the Canal Zone.

Passports—As stated above, passports are required for entering Central and South American countries other than the Republic of Panama, but they are not required for naval personnel or their dependents for entry into the Canal Zone or Panama.

Communications—Unlimited postal and cable facilities are available. Air mail to the United States takes about two days, and ordinary mail eight to 10 days. Cable, radio and telephone service is available at moderate rates, and service is comparable to that in the United States.

United States postage stamps cannot be used in the Canal Zone. Canal Zone stamps must be purchased for all outgoing mail. Postage rates are the same as in the United States.

Language—Spanish is the national language of Panama, but English is spoken and understood by most of the people in the terminal ports of Panama City and Colon. Learning the Spanish language, however, will pay many dividends to you individually—and to United States community relations with the Republic of Panama. While many Panamanians speak English, they will still feel complimented by your efforts to learn their language—which can give you many hours of pleasure.

More Info Requested on Evaluation Work Sheets Of Top Enlisted Grades

The Navy wants more meaningful and up-to-date information on its top five enlisted pay-graders readily available both in the Bureau of Naval Personnel and in the service record.

It intends to get this added data through a revision of NavPers 792, the Enlisted Performance Evaluation Worksheet.

Beginning 16 November, NavPers 792 worksheets submitted on pay grades E-5 through E-9 will contain new entries concerning a chronological history of billets assigned since first enlistment, performance in those billets, and any special qualifications.

This additional information will aid selection boards reviewing service records for selection of personnel for advancement, appointment to commissioned status, and special educational programs. It will also help commanding officers who must make recommendations for advancement, special duty assignments or special schooling.

Completed forms will be submitted semiannually to the Chief of Naval Personnel, with a duplicate retained in the man's service record. Particular emphasis will be placed on each petty officer's leadership ability and potential.

BuPers Inst. 1616.5 contains full particulars on preparation and submission of this report.

DECORATIONS & CITATIONS

"For exceptionally meritorious conduct in the performance of outstanding service to the Government of the United States . . ."

★ CALVERT, James F., CDR, USN, as Commanding Officer of USS *Skate*, SS(N) 578, from 9 to 21 Aug 1958. Exercising superb seamanship and unusual planning ability, Commander Calvert took his ship approximately 2400 miles under the ice into the unknown reaches of the Arctic Ocean, obtaining invaluable scientific and operational information. In surfacing on nine separate occasions through openings in the ice, *Skate* provided the first essential quantitative information on techniques necessary for the utilization of the Arctic Ocean's great strategic values. After reaching the North Pole and surfacing nearby, Commander Calvert took his ship some 300 miles beyond the pole and succeeded in locating, from beneath the surface, the United States IGY Ice Drift Station. Surfacing his ship at the Drift Station, he demonstrated that activities in the most inaccessible part of the Arctic Ocean could be supported by submarine.

★ LEEPER, Lawrence E., ADC, USN, "for exceptionally meritorious conduct while serving with Heavy Attack Units in the Naval Air Force from August 1950 to March 1959. Leeper achieved signal success in the vital field of radar prediction and analysis. He developed the Leeper Radar Prediction System which, with slight modifications, was adopted for use by all Heavy Attack Squadrons in the Navy. In addition, he contributed essentially to the development of terrain models for the 15-Z-5 Radar Simulator Trainer, and devised a system, using a computer and graphs, whereby the recently produced Air Force Area Radar Prediction Analysis can be converted to naval use."

★ MUSTIN, Lloyd M., RADM, USN, as Commander Task Force Eighty-Eight, during the period 22 May 1958 through 1 Oct 1958 in which Task Force Eighty-Eight conducted a particularly complex and difficult special test program of great importance to the Navy. Rear Admiral Mustin planned, organized, and personally directed a major task force in carrying out extended operations at sea without external logistic support for approximately 60 days.

Gold Star in lieu of third award:

★ STRAUSS, Lewis L., RADM, USNR, as Chairman of the Atomic Energy Commission and as Special Assistant to the President of the United States. "Exercising intelligent leadership, sound organizational ability, and a keen understanding of naval problems," Rear Admiral Strauss played an important role in the scientific development and application of nuclear energy for ship propulsion and power plant use.

"For heroism or extraordinary achievement in aerial flight . . ."

★ RAMEY, Robert Winford, LCDR, USN, (posthumously) for heroism, when his aircraft developed mechanical trouble and went into a steep, high-speed, uncontrollable dive from 42,000 feet. While he and his crewmen were preparing to leave the plane, Lieutenant Commander Ramey noticed one of his crewman experiencing difficulty in making an exit through the aircraft escape chute. Electing to remain in the plane in order to aid the man in escaping, he sacrificed his own life in the subsequent crash after freeing his crewman.

"For heroic conduct not involving actual conflict with an enemy . . ."

★ BIRT, Floyd C., AMM1, USN, while serving as Plane Captain and Flight Engineer of an R5D aircraft on a flight from Albuquerque, New Mexico, to Detroit, Mich., on 22 Jan 1957. Birt sustained a broken leg and other injuries when his plane crashed and started to burn after making an instrument approach to the Willow Run Airport at Detroit, Mich., during a heavy snowstorm. In spite of his own injuries, he released the safety belt and shoulder straps from the co-pilot, who was fatally injured, and aided in removing him from the burning plane. Despite the heavy smoke, intense heat, and the imminent danger of further fuel tank explosions, he twice returned to the wreckage and succeeded in removing two critically injured passengers.

★ CONKEY, James V. A., LTJG, USNR, for heroic conduct while serving with the U.S. Naval Ordnance Facility, Port Lyautey, Kenitra, Morocco, on 31 Jan 1958. As Officer-in-Charge of Special Weapons Explosive Ordnance Disposal Team Number One, LTJG (then Ensign) Conkey displayed exceptional courage and initiative while participating in an operation of a classified nature involving great risk of injury to both himself and the members of his team.

★ KELLY, Leslie D. Jr., LCDR, USN, for heroic conduct while serving on board USS *Triton*, SSR (N) 586, then under construction at the Electric Boat Division, Groton, Conn., on 2 Oct 1958 When a valve failed in the main, high-pressure steam line, filling the reactor compartment with extremely hot and blinding steam, LCDR Kelly, after giving the order to secure the pumps and clear the compartment, followed his men through the watertight door into the safety of the next compartment. Upon learning that one of his men was missing, he immediately reentered the area, and succeeded in locating and assisting the missing man to safety.

★ LIPCHINSKY, Joseph M., CWO, USN, for heroic conduct in attempting to rescue from drowning a 13-year-old boy who had fallen through the ice on Nonquit Pond, Tiverton, R. I., on the afternoon of 25 Jan 1959. Hearing a cry for help coming from the direction of the pond, CWO Lipchinsky made his way past thickets to the pond. He attempted to throw a line to the boy. Thrown into the water when the ice gave way, CWO Lipchinsky gave word of encouragement to the youth. While awaiting other help the boy soon lost his strength and slipped beneath the water. CWO Lipchinsky was later rescued by the local fire department.

★ PATTERSON, John E., BM2, USN, for heroic conduct while serving on board USS *Hollister* (DD 788) on 3 Jan 1959 as petty officer in charge of the amidships capstan station. When the target sled wire tow cable came free of the capstan and started whipping through the amidships passageway, Patterson immediately pulled two of his shipmates clear of the cable and observed three other men who were still in the passageway and in extreme danger of being killed or seriously injured by the free-running wire cable. Entering the passageway, he succeeded in helping two of the men to safety. While he was assisting the third man to safety, his foot was caught in wire cable and he was severely injured.

BOOKS

VARIETY TO BE FOUND IN THIS MONTH'S SELECTION

DON'T THINK for a moment, because we select for discussion a relatively few books each month, that these are the only new ones you can find at your ship or station library. There are enough to suit every taste. Drop around and see what's available.

There is most certainly a wide range among the books selected for review this month. One offers a variation of the Kon-Tiki theme; nostalgic yarns about sailing ships contrast with tense thrillers about space ships, sunken submarines and spies.

Tahiti Nui by Eric deBisschop is also the name of a replica of an ancient Polynesian raft which the author sailed across the Pacific from Tahiti to Chile in a challenge to the Kon-Tiki theory. In *Tahiti Nui*, he explains why his raft went in the opposite direction from Kon-Tiki; why it was able to beat against the wind and to steer an accurate course without a rudder by the Tahitian method of a series of centerboards adjusted to various depths.

DeBisschop made the six-month voyage to prove that the Polynesians were the greatest—and earliest—mariners, who, two thousand years before Magellan, were conquering uncharted oceans. His log is not a dry record but a live and interesting account of his trip. Apparently DeBisschop could have taught the Polynesians a few tricks of the trade. Before his Tahitian voyage at the age of 65, he had sailed from Hawaii to the south coast of France via the Indian Ocean and the Cape of Good Hope in a double canoe. He died last year on the return voyage of *Tahiti Nui* when the raft foundered on a reef in the Cook Islands. Quite a man, it would seem.

Real, live sailing ships may be found in ***Give Me a Ship to Sail,*** by Alan Villiers. Here, he tells of his more recent experiences in searching for such ships when they have just about disappeared from the face of the sea. It was Villiers, of course, who sailed the replica of *Mayflower* to the United States from England during the summer of 1957 and this voyage forms a substantial part of the book. He tells also of the race by the "tall ships" from Tor Bay to Lisbon and of his somewhat unhappy experiences with Hollywood.

Only Four Escaped (published in England as *The Admiralty Regrets*) by C. E. T. Warren and James Benson, reminds us that much is still to be learned about the sea. The story of the sinking of the British submarine *Thetis* is a detailed account of the circumstances which preceded the voyage, the sinking, the efforts to escape, the attempts at rescue, and the subsequent investigation. Badly overcrowded (there were technicians, civilian observers and others besides the crew on board), *Thetis* lost 99 men. Only four escaped.

Two other books—***The Clock with Four Hands*** by James Leasor and ***Kōgun*** by Saburo Hayashi in collaboration with Alvin D. Coox—are concerned with World War II.

Clock is the story of the underground nerve center from which the war was conducted in London. One hundred and fifty feet below Whitehall, covering six acres of ground, were the hidden chambers for the War Cabinet and Staff officials. Here also was the secret room where Winston Churchill had a direct line to the White House and on the wall was the clock with four hands, which showed the time in Washington as well as in London.

The book tells in part the story of General Sir Leslie Hollis who was for six years Secretary of the Joint Planning Committee of the Chiefs of Staff and who sat in on all the important meetings of the War Cabinet and attended all the international conferences during the entire war.

Tommie L. Bridges, SN, USNR

". . . Now commence liberty for the starboard section!"

Volumes have been written about World War II in the Pacific but, up to the present, little has been said about the Japanese side from the viewpoint of high-level command plans and policies. *Kōgun* does and, in doing so, presents facts and figures never before available in the United States. The author describes a remarkably clear picture of high command errors in making estimates of the situation; mismanagement in the conduct of operations; and internal disagreement on basic policy.

The Soviet Air and Rocket Forces, edited by Asher Lee, and ***Flattop,*** with text and photographs by Barrett Gallagher, also provide an interesting contrast.

In *Soviet Air and Rocket*—which is a companion volume to *The Soviet Navy*—American, British, German and Russian experts pool their knowledge to provide the first comprehensive evaluation of Russian strength in the air today. Every aspect of the Soviet air and rocket forces is examined in this book, ranging from the daily life and training of the Soviet airman to the political control of the Soviet Air Force; from the past history of Soviet air arms to a projection of their future. Several chapters are devoted to Soviet rockets and guided missiles.

Flattop is, of course, concerned solely with aircraft carriers. However, it does show every major change and development in carrier design and operation from the last year of World War II to the construction of the first atomic carrier. The Korean conflict, the *Midway* and *Forrestal* class, the Sixth Fleet and ASW are discussed by men who know what they're talking about. A major part of the book is devoted to the Pacific carriers in World War II and describes the important changes which have been made in building new ships and in adapting the old ones. Gallagher was a member of the Steichen group.

Two end-of-summer fiction numbers are also included. ***The Big X,*** by Hank Searls, is the yarn about a test pilot who flies the hottest job to get off the ground and is complete with girl, villian and crucial decision. ***Taos,*** by Irwin R. Blacker, is a historical number concerned with Spaniards and Indians in the Southwest. Time, 1680. It's good reading.

ARCTIC RAIDERS OF THE CIVIL WAR

When at war, the nation with the weaker Navy can often make best use of its resources by attacking the shipping of its opponent. This was the practice followed by the Confederate States during the Civil war. One of a series, this month's issue tells of *Shenandoah*, who continued her operations until the end of the war. It was written by Confederate Midshipman John T. Mason.

WITH THE EXCEPTION of *Stonewall,* an ironclad built in France and sent to sea too late to be of any service, *Shenandoah* was the last of the Confederate cruisers to elude the vigilance of the neutral governments of Europe—a much more difficult feat to accomplish then than it had been when *Alabama* and *Florida* had escaped from England some two years earlier.

On 1 Oct 1864, a number of Confederate naval officers who had been for some time waiting orders in England and France, received instructions to proceed at once to Liverpool and report for duty there. I was fortunate enough to be one of them.

Upon our arrival, we were instructed to buy an outfit for a two years' cruise as quickly as possible, to have our trunks packed in wooden cases so that they might have the appearance of ordinary merchandise, and to send them on board the steamer *Laurel.* Nothing was said about *Laurel's* destination, but if we were questioned, we were to say that we were going home.

These orders were issued on Monday morning, and by the following Friday the baggage had all been shipped, and the officers were instructed to remain at their quarters all day Saturday, ready to move at a moment's notice. Not one of these 20 or so officers knew what was to be our destination, nor did we ask.

AT SIX O'CLOCK on Saturday evening, after a day of suspense, orders were received to be on Prince's Pier at nine o'clock and to go on board the tug *Black Hawk.* Twenty-three officers and about a dozen picked men, the latter the remnant of the crew of *Alabama,* which had been kept together for such an occasion, met at the rendezvous and were soon carried on board *Laurel,* then lying in the river. Before daylight, *Laurel* was at sea.

The unsuspecting pilot who took us out complimented Captain Ramsey of *Laurel* on the good behaviour of his passengers, who all seemed to know their places at once, gave no trouble, and asked no useless questions.

Laurel was a small steamer owned by the Confederate government and used afterward as a blockade runner. Her present destination was the Madeira Islands, where she was to rendezvous with *Sea King,* afterward *Shenandoah,* who had sailed from London the same day we departed Liverpool. In addition to the "passengers" *Laurel* also had on board the guns, gun-carriages, ammunition, and all the other equipment and stores intended for *Shenandoah.*

Sea King had been purchased in London by an English merchant. She was loaded with coal and assorted merchandise—provisions and stores of a non-warlike character intended for the cruise. She was supplied with a crew and officers from the English merchant service and cleared for Bombay and other ports in the East Indies on a cruise not to exceed two years. Just an ordinary merchant vessel. None of her officers or crew, with the

From "The Last of the Confederate Cruisers" by Midshipman John Thomson Mason R, pp. 600-610, *Century Magazine,* August 1898.

DRAWN BY JACOB WELLS, AFTER ONE PLANNED BY CAPTAIN WADDELL.

LONG CRUISE of CSS *Shenandoah* took Confederate Navymen around world, and from Arctic Ocean to Cape Horn.

exception of the captain, who had received hints, suspected the ship was bound anywhere but the East Indies.

AT THE MOMENT OF STARTING, however, Lieutenant William C. Whittle, who was to be executive officer of *Shenandoah,* was put on board as a passenger, under an assumed name. As soon as the ship was outside English jurisdiction, he made himself known to Captain Corbet of the *Sea King,* showed his authority from the owner to purchase the vessel, took charge of her, and shaped her course for the Madeira Islands, where she arrived a few days after *Laurel.*

Sea King did not come into the harbor, but signaled *Laurel* from the offing, and we went out and joined her. The two vessels were run under the lee of Desertas Island, where they were anchored alongside, and the guns, ammunition and stores were transferred.

Captain Corbet had with him a crew of 40 or more and we had hoped that most, if not all, would be only too glad to join us, but we were disappointed. Upon being informed of the true state of affairs, they became very indignant at the deception which had been practiced upon them and, when asked if they would like to join *Shenandoah,* they stubbornly declined our offers of generous wages and liberal bounty. If it were not for our presence, it is highly likely that they would have given poor Captain Corbet a ducking.

In the end we paid them three months' wages as a forfeit for the violation of the shipping articles—to which they were entitled under English law—and turned them over to Captain Ramsey of *Laurel,* to be landed at Teneriffe. Only a few firemen and coal-heavers remained with us and, when ready for sea, instead of a crew of 150 men, we could muster only 19 all told.

SHENANDOAH was a full-rigged ship of excellent sailing qualities. She carried a cloud of canvas, having cross-jack, royal studding sails, jib-topsail, and all the high fliers. She had rolling topsail-yards, which were of great assistance in the early days of the cruise, when sailors were so scarce.

She was a wooden ship with iron knees and frame, iron masts and bowsprit, and steel yards, and all her standing rigging was of wire.

She was of the class of vessels known as "auxiliary screws," with a propeller that could be hoisted out of the water when not in use, and a funnel that shut down, like a telescope, flush with the ship's rail. Her engines were small, intended for use only in calm weather, and could not steam much more than eight knots under the most favorable conditions. However, she was a fast sailor and on more than one occasion her log was to show 17 knots.

Our armament, which was mounted under many difficulties during the first few days after leaving Madeira, consisted of six guns—two rifled 32-pounders forward, and four 8-inch shell-guns amidships. There were also two little brass pop-guns on the poop-deck which *Sea King* had carried as a merchantman.

It would be difficult to describe the condition of *Shenandoah's* decks and of the ship generally at the start. Stores from *Laurel* had been simply thrown on board, and lay about in hopeless confusion. The heavy guns and gun-carriages, in huge boxes, so lumbered up the deck it was almost impossible to move, much less work the ship. The vessel was new and strange to us all, and the stores put on board her at London were stowed without any expectation that they would be used during the voyage. Everything had to be overhauled.

THE OFFICERS AND MEN were divided into gangs and went to work. Fortunately, the weather continued fine and within 10 days we had things in pretty good shape —portholes cut and guns mounted and secured, magazines built and ammunition safely stored, the fore and after holds carefully restowed, and everything snug for the voyage.

Meantime, the ship was heading to the southward, as the object of the cruise was to destroy the American whaling fleet in the North Pacific Ocean and the Arctic Sea.

On 29 October, 10 days after the cruise began, when about 15 degrees north of the equator, we captured our first prize, the bark *Alina* of Searsport, Me., bound from England to Buenos Ayres, and loaded with railroad iron.

As all neutral ports were closed to us and our own were closely blockaded, we had no alternative but to destroy her.

The vessel and cargo were appraised and condemned as prize and, within an hour after her capture, *Alina* was scuttled. We took nothing from her but her ensign and chronometer. The officers and crew were allowed to take their personal effects with them when sent on board *Shenandoah* as prisoners.

We made it a rule from the start that there should be no pillaging of the captured vessels. If we needed stores for the ship's use, we took them, but our sailors were not allowed to plunder on their own account.

Alina had a crew of nine men, six of whom joined us at once, and were a most welcome addition to our slender ship's company.

During the next few weeks we were in the track of vessels crossing the equator and made a number of captures. Among them were the schooner *Charter Oak* from

CONFEDERATE CRUISER had a propeller that could be hoisted out of water. Funnel telescoped flush with rail.

REBEL RAM *Stonewall* was bought in Denmark and fitted by ships from England. She was sold to Japan after war.

Boston. Although her cargo included a most welcome addition of canned fruits and vegetables, she also gave us an acquisition we had not anticipated—the captain's wife, sister and little boy.

As we had no accommodations for ladies, Captain Waddell gave them quarters in one of his cabins. A few days later we spoke a Danish brig and transferred a number of our prisoners to her, paying their passage to Rio.

From this ship and a number of prizes we captured in the following few days, we received recruits for our our ship's company. In some cases, all hands volunteered with the exception of the officers.

In one case the captain himself expressed a desire to ship before the mast. This was the captain of the brig *Susan*. He was a German and knew little and cared less about the war between the States. He was deterred from becoming one of us because, in doing so, he might prejudice the rights of the owners of the vessel and cargo in claiming their insurance money.

Most of the sailors in the merchant service at this time were foreigners and it was due to this fact that so many of them shipped with us when their vessels were destroyed.

BY THE LATTER PART of November we were pretty well to the southward, and early in December we entered the whaling grounds of the South Atlantic. We did not stop to cruise here as our principal field of operations was to be in the North Pacific and the Arctic. In passing, however, we picked up one whaler, the bark *Edward* of New Bedford, with a good-sized whale alongside which the crew were busily engaged in cutting up and trying out.

We were now quite near the island of Tristan da Cunha, an out-of-the-way place inhabited by some 40 people, mostly English and Americans, who very seldom saw any one from the outside world. No vessel stopped there except an occasional whaler to get fresh water and provisions. We ran into Falmouth Bay and put ashore the officers and crew of *Edward,* and got from the inhabitants of the island some fresh meat in exchange for some flour we had taken from our prize. This island

was the first land we had seen since leaving Madeira but we did not drop anchor and no one was allowed to go ashore.

The day after leaving Tristan da Cunha we discovered that the coupling band of our propeller shaft had been damaged seriously. This meant that our steaming apparatus was useless for the time being. As our main reliance in fast traveling was upon sails, this accident caused us no delay. We got the propeller upon deck, however, and in the course of a few weeks the engineers repaired the injury as well as possible.

THE WEATHER CLEARED up with the beginning of the new year and on 2 Jan 1865 we made the island of St. Paul, which the sailing directions described as thrown up by volcanic action and uninhabited. We pulled off in a whaleboat and upon reaching the island were surprised to find two Frenchmen in possession. It was used as a fishing station by these men who came from the Isle de Bourbon, on the coast of Africa. They fished during the summer and left in the fall with their catch as the winter season was too stormy to stay on the island. The water of the harbor literally swarmed with fish and we very soon filled our boat. On one margin of the little bay we found a spring of water hot enough to cook the fish we caught from the other end of the boat.

The damage caused by the broken coupling was more serious than suspected and it took several weeks in dry-dock in Melbourne before Shenandoah *was ready for sea again. Authorities and citizens were friendly but an unpleasant situation arose over false charges that* Shenandoah *was recruiting British subjects to fill out her crew. There may have been some grounds for these suspicions for, after the ship had cleared British jurisdiction, more than 40 "stowaways" were found on board, of every nationality, including English.*

By April, the ship had worked her way to Ascension Island, where the account is resumed.

RAIDER—CSS *Florida* escaped from England two years before *Shenandoah,* when such getaways were easier.

ON APRIL 15 we went to sea again, having spent two weeks at Ascension Island, and continued our northerly course. Upon reaching the outer edge of the Japan seas, we cruised there for about a week in the track of vessels crossing the Pacific; but meeting no American ships, and our principal object being to capture whale-ships, we went on to the Okhotsk Sea, which we entered on the 20th of May.

We captured the whaling-bark *Abigail,* which we burned, taking the officers and crew on *Shenandoah.*

We found floe ice as far as the eye could see. Fortunately for us, the weather remained calm, and we were able to work out of our uncomfortable position without serious damage.

We cruised three weeks in the Okhotsk Sea; but either there were no more whalers there, or else we could not find them, and at the end of that time we passed out, and shaped our course for Bering Sea and the Arctic Ocean. Our prisoners from the *Abigail* were a very jolly set, and bore their misfortune with great cheerfulness. Almost every evening they would enliven the monotony of their captivity by a dance on the forecastle or a "shanty." Fifteen of these men joined us, among whom were two of the mates.

On the twenty-first day of June we entered Bering Sea, and crossed the 180 the meridian of longitude.

Having completed half the circuit of the globe in an easterly direction, we gained a day; but before nightfall we went out of our course to chase a ship, which carried us back to the other side, and our new day was lost almost as soon as won. The following morning, however, we again crossed the central meridian, and the 22d of June was a double day, 48 hours long.

THE SIGHT OF LARGE PIECES of "fat-lean," or whale meat, floating in the water now warned us that whalers were at work nearby, and very soon afterward we came up with several.

The week which followed was the busiest of the cruise. Not a day passed without our making one or more captures.

In all we took 25 whale-ships, which, with the exception of three or four, were burned. Some disposition had to be made of the prisoners, and as we could not put them ashore in those frozen regions, we were obliged to bond one vessel in every six or seven, in order to dispose of the crews of the others.

Occasionally, when the weather was fine and we had more prisoners than we could conveniently accommodate on board, we put them astern in whale-boats for the day. On one occasion we had 24 of these loaded boats towing astern.

Our last capture was made on the 28th of June, on which day we took 11 vessels. Nine of them were fired, and were all burning at the same time within a few miles of one another. One of these 11 vessels had been caught in an ice-floe, and was so badly injured that her captain had determined to abandon her, preparatory to which there was a sale of all the movables on board, which the other vessels had assembled to attend. Most of these were at anchor near the injured vessel, and hence we captured them all with but little trouble.

THE CAPTAIN of one of these vessels showed fight. He mounted the poop-deck of his ship, armed with a bomb-gun used in killing whales, and threatened to fire

into the boat which was about to board him. The officer in charge of the boat, however, disregarded this threat, pulled to the gangway and boarded with his crew.

When the flag was about to be hauled down, another scene of the same sort was enacted; but by this time the boarding party had discovered that the belligerent captain had been celebrating the occasion and was royally drunk. He was taken in charge after some resistance, and refusing to leave his ship, had to be lowered into the boat with a block and tackle. Several of the ships, when they saw what was going on slipped their cables, and steered, some for the shore to get within the marine league, and some for the ice-floes; but as the wind was light, and we had steam up, we very soon had them all in hand.

We were now in Bering Strait, and the next morning entered the Arctic Ocean, and the navigation was very dangerous.

There was every reason to believe that a number of whalers had passed into the Arctic ahead of us, and we hoped to come up with them; but the captain was afraid to venture very far, the ice being so heavy; and after a day spent in the Arctic, we turned and steered to the southward. On the 5th of July we passed out of Bering Sea into the Pacific, and saw the last ice-floes.

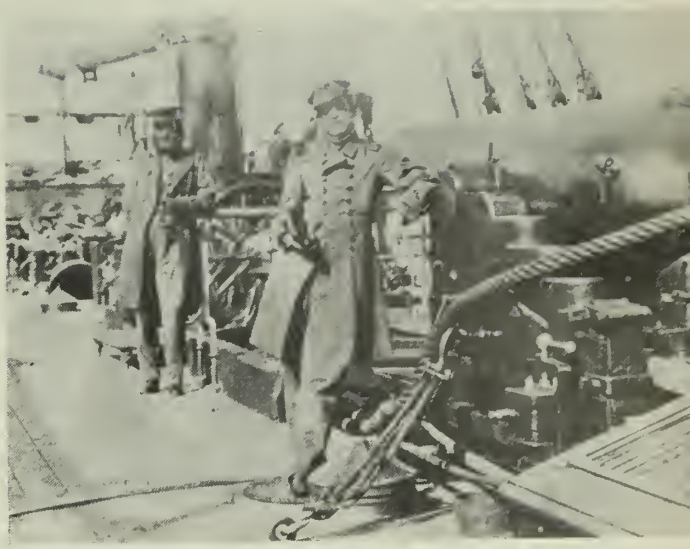
FOR THE NEXT MONTH nothing occurred to break the monotony of ordinary sea life on *Shenandoah*. We were steering to the southward to get into the track of the China traders and the Pacific mail-steamers. By the end of the month we were in the desired cruising-ground, and on the 2d of August we overhauled and spoke the English bark *Barracouta,* from whom we received news of the collapse of the Confederate government.

While in the Arctic Ocean we had received from *William Thompson,* one of the captured whalers, California papers of 22 April, giving an account of the assassination of Mr. Lincoln and the evacuation of Richmond; but the same papers contained the proclamation of Mr. Davis, issued from Danville, saying that the war would be prosecuted with renewed vigor. We had hoped all along that the disaster might not be as bad as these accounts stated; but *Barracouta* had left San Francisco on 20 July and it was impossible to doubt the correctness of the news she gave us. Yet, so strong had been our faith, it seemed incredible to us.

The important question now arose as to the proper disposition to be made of *Shenandoah.* Captain Waddell at first thought of taking the ship to Australia, and running into Sydney or back to Melbourne, and the course of the ship was altered with that view, and for 24 hours we steered for Australia.

At the end of that time, however, the captain changed his mind, and the course was again altered, and we resumed our way to Cape Horn. The captain announced to the officers and crew that he had determined to take the ship to the nearest English port; but her actual destination was not made known to any one.

Immediately after parting company with *Barracouta,* the guns of *Shenandoah* were dismounted and sent below in the hold for ballast; the port-holes, which were of our own construction, were boarded up again; and all the small arms and warlike appliances were stowed away between decks. We kept the ship under sail most



SKIPPER OF CSS *Alabama* was Captain Raphael Semmes, probably most famous of the Confederate sea raiders.

of the time, with propeller up and smokestack "reefed," saving the little fuel that remained for condensing fresh water for the use of the ship's company, and for any other emergency that might arise.

OUR CREW, augmented by the stowaways from Melbourne and volunteers who had joined us from the prizes captured, now numbered about 130 men, of all nations under the sun. As they were acquainted with the unfortunate termination of the war for the South, and knew that *Shenandoah* had no government behind her, we had contemplated the possibility of having some trouble with them.

But in this we were agreeably disappointed, for every one of this cosmopolitan crew behaved with perfect subordination. Our first lieutenant, Mr. Whittle, had from the start preserved the most admirable discipline on board at all times, and it was in a great measure due to his excellent management that no difficulty occurred.

On 29 September we struck our track of the year before in the South Atlantic, and early in October crossed the equator. So far we had not lost a man by sickness or accident, but we had now two very sick men on board. There is a superstition among sailors that, however long a sick man may last at sea, he is sure to die as soon as he "smells the land." Our two invalids respected this superstition, for they died within a few days of each other, and less than a week before the ship reached Liverpool and when some of the old sailors declared they could smell the bogs of Ireland.

On the 5th of November, 1865, we reached England, anchoring in the Mersey on the morning of the 6th, and the cruise of *Shenandoah* ended, the vessel being surrendered to the English authorities. When we took on board the pilot, the first question we asked him was about the war in America, as we had been hoping against hope that there might be some mistake about the news we had received in the Pacific. This called forth a cartoon from "Punch," representing *Shenandoah,* with Captain Waddell astride one of his guns, shouting through a huge trumpet to a pilotboat in the distance; "Is Queen Anne dead?" [*She died in 1714.*]

TAFFRAIL TALK

WITH DEEPEST REGRET we take note of the passing of Fleet Admiral William D. Leahy, USN. The nation's and the world's press has written much of his distinguished and honorable career. However, we would like to add a little yarn we think is a fitting epitaph for a blue-water sailor.

FADM Leahy, while in retirement, was visiting his son in the Hawaiian Islands. During his visit, he went to a barber shop he had frequently patronized. The barber, a long-time friend and admirer, greeted him, as always, with a cheerful "Hello, Admiral Leahy."

A young sailor, next in line, offered to let the admiral to take his place. "Go ahead, son, and thank you," replied the admiral. "You have to go back to work. I have plenty of time, now."

Admiral Leahy made the best of his time in the Navy, and it was a better Navy because of him. We're proud to have been in the same uniform with him. We're sorry that he's gone.

* * *

As we've said before, in the course of our travels we run into a lot of good stuff we just can't find the proper space for in the magazine. In this connection, we'd like to refer to the sailing directions of that old fresh-water sea dog, Captain Thomas F. Burns, Buffalo, N. Y., who served as pilot for USS *Oglethorpe* (AKA 100) during Operation Inland Seas.

For instance, when approaching Cortunigh Point, he gave orders to the steersman with words like this: "See the haystack there to the north of Peggy's Barn? Keep it open to the north till we are abreast of the outhouse, then we'll haul northwest. . . . Now, give me a little left rudder. We'll hold this course till the hay stack can be seen through both the north and south barn doors. . . . Now haul north . . . OK, just steer on the laundry there west of the Mooretown graveyard.

Although *Oglethorpe* cleared the Portage on a clear day, Captain Burns had some sound advice for future mariners when the situation became a little sticky: "When approaching the Portage during a fog, keep sounding your fog whistle until you pick up the bark of Olsen's dog. He's always at the garden gate, so when the bark bears southwestward, haul south and pass between the piers."

He interrupted his advice to walk out on the wing of the bridge. "Always say hello to the dog in clear weather. Otherwise, he may not answer when you need a bearing."

We're indebted to LTJG George T. Odom, of *Oglethorpe* who, open-mouthed with astonishment, made these further notes of Captain Burns' *Notice to Mariners:*

"Now keep Squirrel Island light well open to port. When the red light on the Squaw's shack comes out clear of the Walpole Reservation, haul and head on the red light until abeam of John's Tavern—that's the one with green neon lights on the roof—then starboard until the red light on the Squaw's shack is six degrees off the port bow."

While going up the St. Clair River, it was: "Steer 101 degrees on Joe Bedore's Joy House until the lone pine tree on the Canadian bank bears four points on the starboard bow, then haul and steer 133 degrees. When Joe's wood pile is four points abaft your beam, haul to 091 degrees, and steer on the Canadian club house." Now you know. You have the conn.

The All Hands Staff

The United States Navy

Guardian of our Country

The United States Navy is responsible for maintaining control of the sea and is o ready force on watch at home and overseas, capable of strong action to preserve the peace or of instant offensive action to win in war.

It is upon the maintenance of this control that our country's glorious future depends. The United States Navy exists to make it so.

We Serve with Honor

Tradition, valor and victory are the Navy's heritage from the past. To these may be added dedication, discipline and vigilance as the watchwords of the present and future. At home or on distant stations, we serve with pride, confident in the respect of our country, our shipmates, and our families. Our responsibilities sober us; our adversities strengthen us.

Service to God and Country is our special privilege. We serve with honor.

The Future of the Navy

The Navy will always employ new weapons, new techniques and greater power to protect and defend the United States on the sea, under the sea, and in the air.

Now and in the future, control of the sea gives the United States her greatest advantage for the maintenance of peace and for victory in war. Mobility, surprise, dispersal and offensive power are the keynotes of the new Navy. The roots of the Navy lie in a strong belief in the future, in continued dedication to our tasks, and in reflection on our heritage from the past. Never have our opportunities and our responsibilities been greater.

ALL HANDS the Bureau of Naval Personnel Information Bulletin, with approval of the Bureau of the Budget on 25 June 1958, is published monthly by the Bureau of Naval Personnel for the information and interest of the naval service as a whole. Opinions expressed are not necessarily those of the Navy Department. Reference to regulations, orders and directions is for information and does not by publication herein constitute authority for action. All original material may be reprinted as desired if proper credit is given ALL HANDS. Original articles of general interest may be forwarded to the Editor.

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• AT RIGHT: LAND HO—Across the street from the Merchandise Mart in Chicago, *USS Joseph P. Kennedy, Jr.*, (DD 850) receives visitors. The ship traveled to the Midwest via the new St. Lawrence Seaway.


850

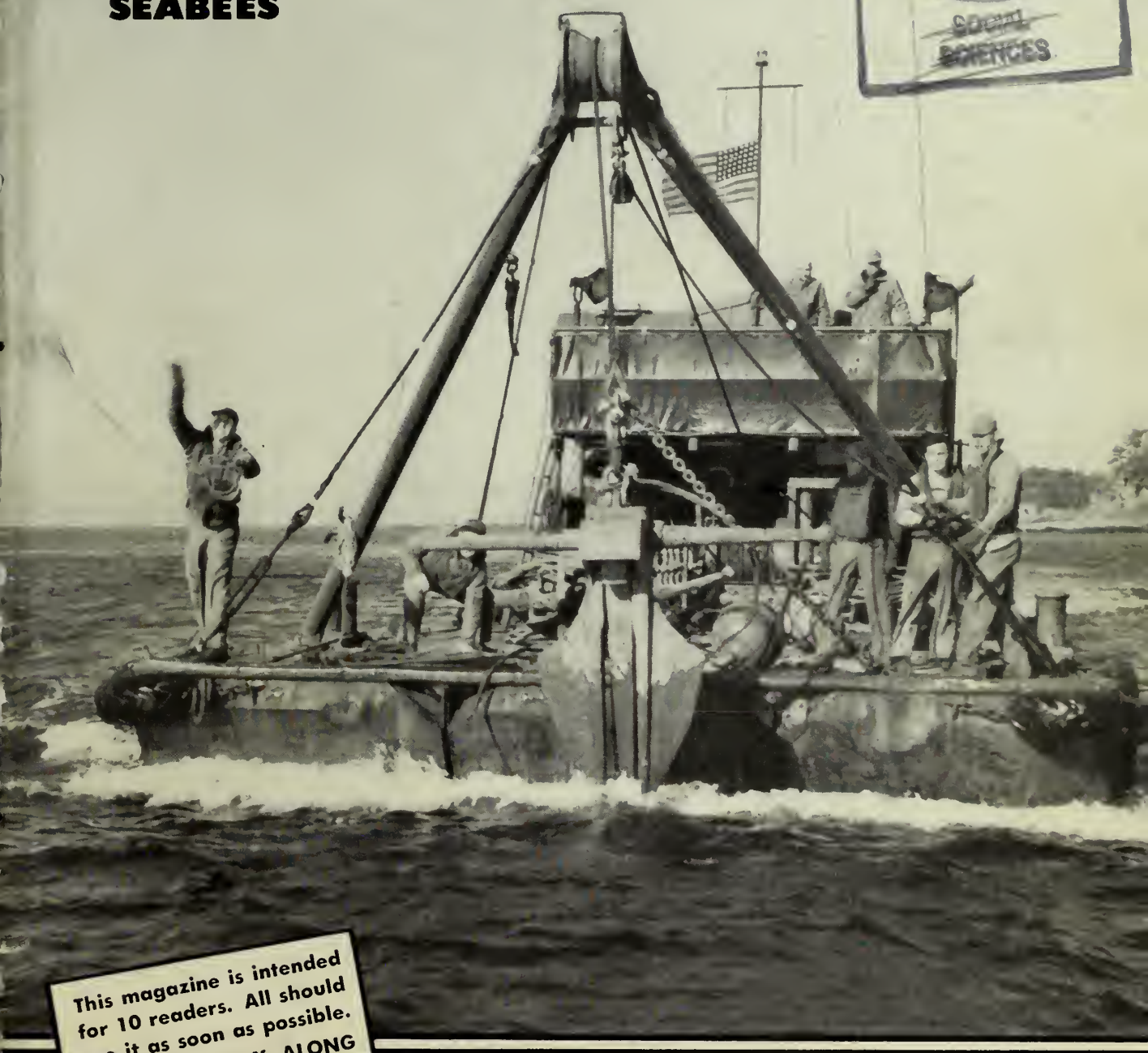
ON LEAVE OR LIBERTY

PLAN YOUR TRIP WITH TIME FOR SAFETY

ALL HANDS

THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN

in this issue
THE
SEABEES



OCTOBER 1959

ALL HANDS

THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN

OCTOBER 1959 Nav-Pers-O NUMBER 513

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• **FRONT COVER: CRAFTY**—Unusual looking craft is a product of Seabee 'Can Do' ingenuity. Known as warping tug, it is used by Amphibious Construction Battalions to beach causeways and assist in salvage operation.

• **AT LEFT: CLAD TO MEET DAD**—Sons of J. Wingo, QMC, USN, were dressed in uniforms like Dad's when Mom took them to meet Chief Wingo as his ship, USS Genesee (AOG 8) returned from Western Pacific cruise.

• **CREDITS:** All photographs published in ALL HANDS are official Department of Defense Photos unless otherwise designated.

FIGHTING SEABEES built Pacific bases from Alaska to South Pacific. Here, CBs dig gun position on Attu Island.

Know How + Can Do =

THEY UNLOADED supplies on beachheads under enemy fire, bulldozed jungles at night in tropical downpours, built airstrips on the polar icecaps, and for diversion when things got "hot," they wielded a carbine or 'dozer and blasted the enemy out of the picture.

These were the Seabees — the "Can Do" men of World War II. They were a hearty lot and the story of their deeds and accomplishments has been told and retold again and again. But, it's a story well worth repeating.

It all started back in World War I when a Public Works Regiment was organized at the Great Lakes Naval Training Station (now NTC).

Here's how the first outfit was described by its commanding officer, CDR (later CAPT) W. H. Allen:

"The men averaged several years older than the ordinary recruits. A large part of them had had several years' trade experience before enlistment. Many were married. They were not boys, but men, and this characteristic was particularly noticeable in parades because of their better physique and more mature carriage. They did not appear like a battalion of recruits but as a body of men who had found themselves. They looked businesslike. . . . .

"Though they worked long hours and received little liberty, yet at all times, no matter how prosaic and uninspiring the task, they seemed to realize that they, too, were contributing something of value toward ultimate victory. . . . .

"The greater the urgency of the job, the more they seemed to enjoy it. A strong regimental pride and esprit de corps *developed. The discipline was excellent. The device of the Civil Engineer Corps, which the men wore on the left sleeve, meant to them a standard of work and living that must be kept high."*

THAT WAS the very beginning. But, as you can see, things haven't changed much—especially when it comes to esprit de corps, hard work and accomplishing the impossible.

Part of that first Public Works Regiment did construction work in France. Half of the party sent overseas to build and operate the air station at Poillac was from the Regiment, as was also the railroad party that assembled and operated the trains for the 14-inch naval guns that did such good work on the battle line in France.

When the first World War ended, the Regiment was disbanded and all but forgotten. However, the thought that construction battalions could be of great value to the Navy persisted in the minds of a few Civil Engineer Corps officers whose responsibility is to design, build and maintain what the Navy needs ashore. These officers knew that men working under combat conditions and at islolated places, need military training and discipline, both for their own protection and for the fulfillment of their mission.

The Japanese attack on Wake Island at the outbreak of World War II dramatically proved these CEC officers to be correct. The civilian construction men not only lacked

SHATTERED islands, like Angaur, were transformed into operating bases. *Below:* CBs wade in to rebuild enemy pier.

Seabees

weapons, but had they been captured as fighting men, they could have been shot as guerrillas.

As a result, on 28 Dec 1941, the Chief of the Bureau of Yards and Docks, RADM (later Admiral) Ben Morrell, requested the establishment of Construction Battalions, and on 5 Jan 1942 issued Recruiting Circular No. 1-42 authorizing enlistment in Naval Construction Regiments, consisting of three battalions. Officers of the Civil Engineer Corps were put in charge of the Seabees, all of whom were—and still are—enlisted men. The name "Seabee" came about from a play on words developed from the initials "CB" meaning Construction Battalion.

These "Can Do" men of World War II came from assorted dangerous fields of enterprise, too. They were natural fighters with a lot of mechanical capabilities, and were ready to carry on in the jungles as well as, if not better than, the enemy. They were men who could cope with loneliness and danger, and they

FIRST U. S. SHIP moors at petroleum pier of new Navy base at Rota, Spain.

Detachment Romeo Does It Again at Rota

Earlier this year, U. S. Naval Mobile Construction Battalion Six was deployed to the Navy's newest and largest base in Europe—Rota, Spain.

Detachment Romeo, the Battalion's advance party, which had gone to Spain four months before, constructed a camp of 53 quonset huts, one butler-type building to provide berthing spaces, administrative offices, bachelor officer quarters and a crew's mess.

Before being deployed, MCB Six completed six weeks' advanced Marine infantry training at Camp Lejeune, N. C.

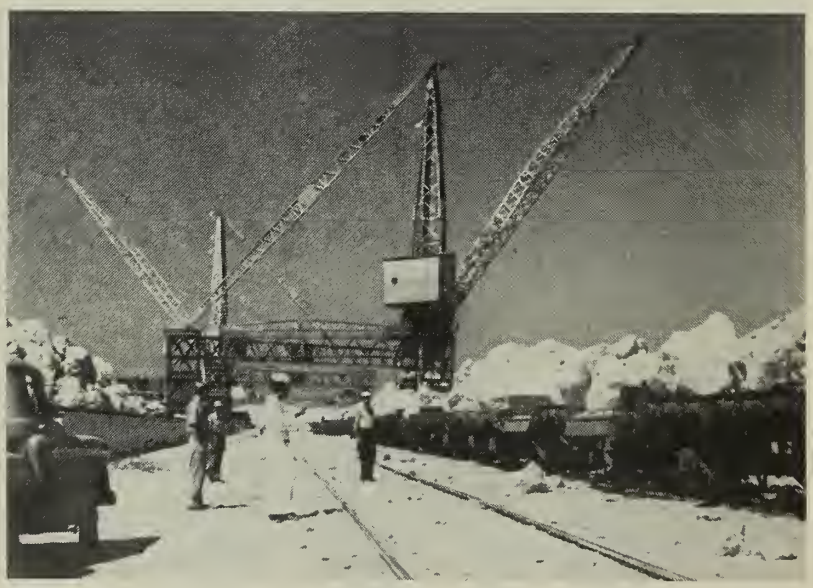
CDR L. W. Graves, CEC, is MCB Six's commanding officer, and LCDR O. R. Butterfield, CEC, is executive officer.

Rota, like other United States bases in Spain, is on soil occupied jointly by Spanish defense activities. A Spanish Navy admiral is in command of the entire Rota base area; a U.S. Navy captain commands American activities.

Mutual Defense, Economic Aid and Defense agreements signed in 1953 by the American and Spanish governments provide for a 10-year use of the base sites.

When completed, the American installations at Rota will have cost an estimated $120 million. Facilities of the base will make it one of the world's most modern warship and aircraft support stations.

Strategically, Rota is ideally situated for the support of Eastern Atlantic and Sixth Fleet operations. The base, located on the Atlantic coast, has become the largest U.S. naval shore unit in the European-African area.



BIG JOB—Navymen of MCB-6 pitched in with 'Can Do' spirit to provide the facilities needed during construction of Spanish-American naval base.

could go into battle, if necessary, with little military training.

After all, they were the mountain movers who had built Hoover Dam, the sandhogs who had tunneled under the East River, the human spiders who had spun a steel web over the Golden Gate, the lumberjacks, catskinners and dockwallopers who teamed up to build a 10,000-mile road to Tokyo.

THIS WAS HOW the Seabee Battalions were formed. As rapidly as they could be assembled and outfitted, the men were shipped overseas and put to work. And that they did. They went ahead and built a string of advanced bases from the far reaches of the South Pacific to the very doorstep of Japan itself. And they did all this under the worst conditions possible.

The construction of these advanced bases involved a series of many-sided operations. Not only did they entail unloading supplies on beachheads under enemy fire, but they also meant rehabilitating existing enemy harbor installations and airfields, as well as overcoming natural obstacles found on the barren islands of the Pacific. The ingenuity used by the Bees in licking these problems earned for them their "Can Do" motto.

The Seabees gained fame for their construction shortcuts. Although many of these innovations came from the drawing boards of design engineers, many more of them—classified as the "spit and string" type—were developed during actual wartime construction projects.

Examples of this include some of the tricks which the Bees executed in the quick construction and repair of airstrips in the Pacific. A single bulldozer used to knock down palm trees to clear a strip was not unusual, until an even faster method was developed. A cable was strung between two dozers that ran on each side of a row of palms, sweeping at one time all the trees between them.

In the repair of airstrips after bombings, their quick methods and short cuts were of utmost necessity. Frequently, planes were aloft, circling while the craters were being filled.

ANOTHER DEMONSTRATION of Seabee ingenuity was the use they made of discarded materials. They put empty oil drums to all sorts of

uses. For example, they cut off the ends and welded them into drainage pipes by the mile; they cut them up for trusses, filled them with sand or coral for buttresses, welded them around broken mains. In one instance, the Seabees even used them for the hull of a canoe, complete with outriggers made from the floats of a downed Japanese seaplane. They also used them for culverts, sewers, chimney pipe, shower baths, furniture, stoves and bathtubs, and rolled them out flat for walls, roofs and dock shorings.

In addition to their trade-skills, the Seabees proved to be excellent defensive troops under fire. They underwent their first actual combat during the battle for Henderson Field at Guadalcanal, where the Sixth Battalion pitched in to help the Marines defend that key airstrip.

Even with fighting going on, and despite a shortage of equipment, they rebuilt the field. Although a target for almost daily bombings, Henderson Field was never out of operating condition for more than four hours at a time. The Seabees, using everything from helmets to trucks, filled bomb craters as fast as they appeared.

Later, over in the Med, the 1006th Detachment rode pontoons in to the shallow beaches of Salerno under heavy fire from the hills above. They were exposed like sitting ducks, and casualties ran as high as 23 per cent. Their job was done, though.

The 40th Seabees were presented the Army Distinguished Unit Badge by General MacArthur for action against enemy forces in March 1944 on Los Negros Island—the key to the Admiralties. They landed at a time when the Army's dismounted cavalry units were barely able to hold their own, and drove their bulldozers into a 200-foot jungle strip to clear fire lines for Army guns. During the night, harassed by infiltrating enemy troops, they adopted infantry tactics in self-defense, scouting pockets of resistance and spotting pillboxes. Then, while the enemy was being pushed back, they began repairing the airstrip and building companion facilities.

WHEN THE SEABEES found they were the target of an enemy airborne landing on Okinawa, they threw down their tools and grabbed their carbines. By dawn they had killed or captured every member of the invading forces — before any critical damage could be inflicted on our planes.

TEAM WORK—Men of Navy Construction Battalion team up with Army Engineers to build a base in the Marshalls for attacks on the enemy in WW II.

As the war progressed the Seabees were organized into special battalions to handle cargo and to keep bulging supply lines moving. This venture, described as "the biggest stevedoring job in the world," led to today's *cargo handling battalions.*

Since there were no piers or wharf facilities on the islands which served as stepping stones in the Pacific, ships had to anchor offshore and unload their cargoes through barges. The barges then ran to the beach, where the cargo had to be off-loaded, and then loaded again onto trucks. This ship-to-shore movement doubled the normal amount of stevedoring.

Who Are the Seabees?

They are the enlisted men of the Group VIII ratings who comprise the Navy's Construction Battalions.

They include Surveyors (SV), Construction Electricians (CE), Construction Mechanics (CM), Builders (BU), Steelworkers (SW), Equipment Operators (EO), Utilities Men (UT), and the apprenticeship level Constructionmen (CN).

These general construction ratings are divided into 17 additional service ratings at the third and second class petty officer level.

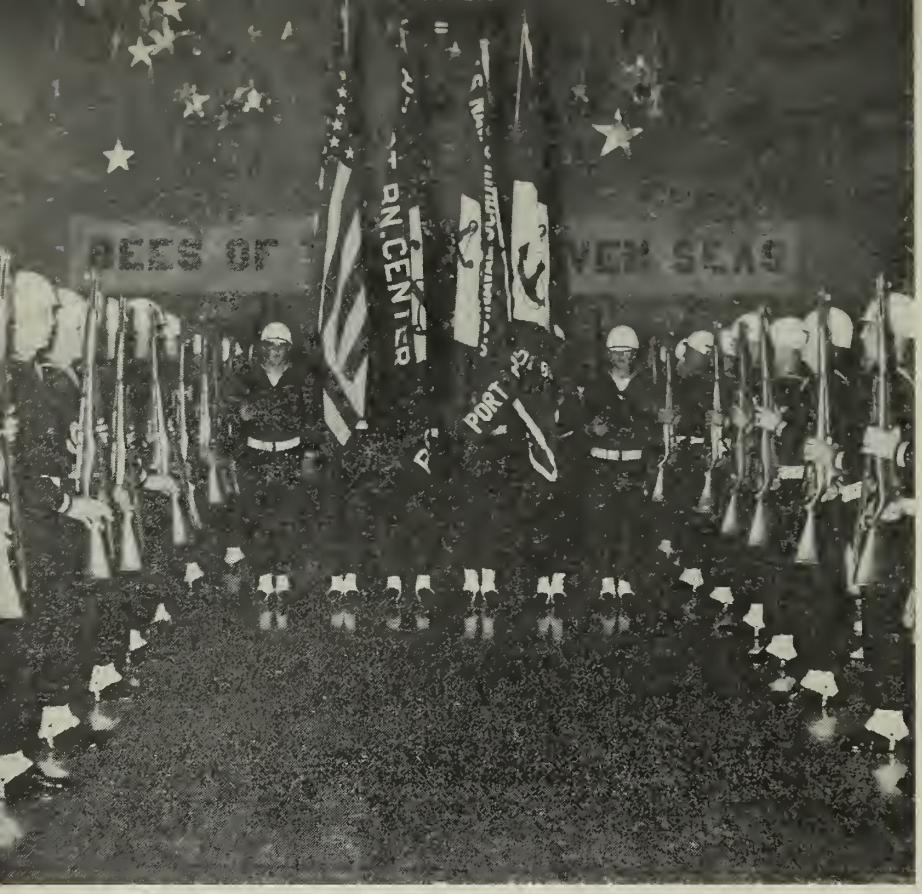
One of these special battalions went ashore at Okinawa to unload supplies and duck enemy shells. In a single 24-hour shift, the Seabee stevedores unloaded more than 70,000 tons of supplies.

Seabees also provided many of the personnel who were transferred to the Underwater Demolition Teams formed shortly after the assault on Tarawa—when it became evident that someone had to blast channels through coral reefs and man-made obstacles so that landing craft could reach the beaches.

OTHER SEABEE groups included *waterfront battalions* that specialized in harbor installations; *automotive repair detachments* whose specialty was the maintenance and repair of automotive equipment; *advanced base depot detachments* which were trained to speed the flow of spare parts and replacement equipment; *pontoon battalions* which specialized in the assembly of pontoon causeways, pioneering their use at Sicily and Salerno, and manning the sunken causeways at Normandy; and the *construction battalion maintenance units* (CBMU) which maintained existing bases, to release full battalions for building other bases.

By V-J Day, the Seabees had built more than 400 advanced bases in the Atlantic and Pacific. These construction projects involved the staggering sum of two billion dollars.

THEY'R



SHARP AS EVER—Present-day Seabees are still very active around the world. Here, Color Guard unit brings forth colors at Port Hueneme, Cal., ceremonies.

THE SEABEES TODAY ARE STILL very much around, and you'll find them in all corners of the world carrying on with the same old determination and "Can Do" spirit.

Take the Bees in the Pacific for an example. You'll find them engaged in peacetime projects on many of the same islands where history was made during the war years. During the past year, Mobile Construction Battalion Three (MCB-3) was at work on Okinawa while the members of MCB-5 were tackling projects on Midway and in the Hawaiian Islands. MCB-9 was in Alaska, and MCB-10 returned to Port Hueneme after being home-based on Guam for the past six years. MCB-11 moved into the Marianas after having been deployed to Cubi Point in the Philippines.

Here's a rundown on the activities of these five Mobile Construction Battalions:

MCB-3 at Okinawa

WHEN THE MAIN body of MCB-3 arrived at Naha, Okinawa, in January 1958, it became the first battalion of Seabees to be assigned to that island since 1945.

Since arriving there, it has been engaged in the construction of the Marine Corps Air Facility at Futema and a small boat basin at White Beach.

When completed, the air facility will be used as a heliport for training advanced units of Fleet Marine Force, Pacific, in vertical assault operations. The Bees are using the most modern precast concrete designs in the permanent construction of MCAF Futema.

Work was underway shortly after MCB-3 arrived in Okinawa, and it didn't take long for the first mold to be fabricated. From it, the precast roof panels were turned out. A production line operation was set up for the precasting of these panels which would be the envy of any construction contractor.

Seabee ingenuity appeared on the scene when a standard straddle truck was used to create a wide model giving a "stretching" effect. This unique piece of equipment was developed to handle the precast roof panels which are 19 feet long and over seven feet wide.

MCB-3 erected its own concrete batch plant adjacent to its precast yard. Mass production techniques were developed to turn out steel assemblies for the roof panels, precast frames, footings and many other requirements of the project.

Less than seven months after the men of MCB-3 landed on Okinawa they had erected their first precast building shell. During the following two months they put up the first precast hangar frame. That 100-foot-span frame consisted of two 27-ton concrete "L's" which were joined by a steel pin. The four-hangar project has five such two-piece frames per building. They are precast on the site of each hangar and erected by a single crane. This was done through the use of an erecting tripod in the center supporting the first half-frame, which was another MCB-3 innovation.

While work was progressing at the Marine Corps Air Facility, 29 men from MCB-3 were engaged in the White Beach boat basin project —expected to take nine months to complete.

Another first for the battalion was the erection of a large 52-foot precast frame span for the enlisted men's mess hall. This feat was doubly significant since a civilian contractor on the island failed in three attemps to raise a similiar frame which cracked during erection.

For its outstanding accomplishments during 1958, MCB-3 was awarded the "Best of Type" Award.

Detachment Alfa at Pearl

WHILE THE THIRD Bees were occupied at Okinawa, MCB-5 moved into the islands famed for their gooney birds and hula dancers. The main body of that battalion went to Midway, while MCB-5's Detachment Alfa was assigned various construction and rehabilitation projects in our new 50th state.

Alfa had barely arrived at NavSta Pearl Harbor when a detachment of 21 men was sent to Kauai Island to provide beach support during salvage operations on uss *Chittenden County* (LST 561) which was beached on a reef. They set up a camp on the beach adjacent to the marooned landing ship complete with a cook shack, tent area and an improvised shower.

The Bees constructed and maintained a causeway, set up generators and pumps on the stranded LST and provided transportation and engineering support. Eighteen days later *Chittenden County* was free.

STILL GOING STRONG

Back on the Island of Oahu, Detachment Alfa demolished and removed many concrete blocks and reinforced concrete structures at Ft. Weaver, an old Army camp, to make way for a future housing project.

At NAD Lualualei, the Bees renovated an elephant quonset hut for use as a gymnasium, installed night lights in the swimming pool, built a snack bar and volleyball court.

Another Hawaiian venture took three officers and 73 men to Kahoolawe Island where they worked for approximately six weeks building and rehabilitating target sites. After unloading their equipment they set up camp, using 16 x 16-foot tents for sleeping quarters.

The surveyors immediately went to work, erecting flags on points from which they could triangulate range and target locations. Meanwhile, the drivers rebuilt an 11-mile road which runs around the island. It will be used in the future to rehabilitate and service the target sites.

Kahoolawe Island is used by the Navy and Air Force for target purposes. Its population consists of several hundred wild sheep and goats. The Bees adopted two orphaned goats which they named "Regular" and "Reserve." The mascots were later given to the explosive demolition personnel who assisted the Bees by removing unexploded bombs from the construction sites.

MCB-5 at Midway, Philippines

DURING THE TIME Detachment Alfa was going about its duties, the men in the main body of MCB-5 on Midway were giving the Naval Station there a general face lifting. They surveyed and removed about 70 wooden frame structures which were beyond repair; relocated the station post office; cleared a large area for future housing; resurfaced the station's roads; replaced aviation gas lines; and repaired quonset huts, Public Works buildings, transient barracks, the battle command post, the seaplane ramp and the fuel farm.

All this was done in about six months' time, and MCB-5 returned to the Construction Battalion Center at Port Hueneme. After a few weeks of leave and training the unit boarded USNS *Sultan* for deployment to the Philippines.

MCB-5's schedule in the Philippines included several projects which were carried over from the previous battalion's deployment there.

Among these carry-over projects completed by MCB-5 were the transit shed and warehouse buildings at the Naval Supply Depot, Subic Bay. These facilities were of such a magnitude as to require the employment of two battalions in their construction. MCB-11 started them in the spring of 1958 and completed the basic structures. MCB-5 then took over to complete all of the interior work, which called for the installation of electrical, plumbing and sprinkler systems, as well as the finished painting.

CONTINUATION of 'Can Do' spirit of CBs is symbolized by totem pole erected after job in Kodiak, Alaska.

Another carry-over project was the installation of four 420,000-gallon fuel stowage tanks, all of the connecting utilities, pumping facilities, roads, security fencing and lighting and drainage facilities. This project was started by MCB-3, continued by MCB-11 and brought to a conclusion by MCB-5.

Other projects in the Navy's construction program in the Philippines which the 5th Bees tackled included the installation of some 11,000 feet of guard rails and 1300 feet of security fencing at Cubi Point. They also laid 17,000 square feet of asphaltic pavement and installed a bollard to facilitate the mooring of aircraft carriers at the air station.

On the Subic side, they developed a 25-acre storage area at NSD. Of this, an area of 100,000 square yards was paved to create a hardstand for stowage, while the remaining area was filled with 125,00 cubic yards of coral. This storage area, complete with the storage shed and warehouse facilities mentioned earlier, provides the Naval Supply Depot at Subic with one of the most modern and efficient port of entry facilities in the entire Naval Establishment.

The Bees from MCB-5 also installed over 4000 feet of chain link fence along the Kalalake Channel to provide for a relocation of the Naval Station boundary, and constructed a new uitilties building for the Public Works Center. This building, approximately 100 by 200 feet, is of reinforced concrete with precast concrete roof panels. These panels were cast by MCB-5 on a 24-hour schedule. This building contains air-conditioned offices and shop facilities for the utilities division of the Public Works Center.

DURING PREVIOUS DEPLOYMENT in the Philippines, MCB-5 was known as the "Waterfront Gang" because of the numerous waterfront facilities it constructed. During the

recent deployment, the "Waterfront Gang" came through again by constructing a 250-foot pier at the Fleet recreation beach at Maquinaya.

At the Naval Communication Station, San Miguel, which is about 20 miles north of Subic Bay, 60 enlisted men of the battalion constructed three three-bedroom duplex married enlisted men's quarters, and installed a security lighting system around the station. These housing units were two-story buildings of pre-cast concrete panel design. The security lighting system included the setting of 90 poles, the stringing of four miles of wire and installation of the necessary light fixtures.

The main body of MCB-5 departed from the Philippines in March of this year, but a delayed party remained for the clean-up work and to finish the utilities building. Although the Bees worked on a rigid schedule —six days a week for six straight months—they had ample time to take advantage of the many recreational facilities available to them in the Philippines.

One of the most popular off-duty hangouts at Cubi Point was the Seabees' own enlisted men's club—the "Sawali." This club was originally erected for the benefit of the Bees who constructed Cubi Point, and has been operated by the Bees ever since. Capable of accommodating up to 1000 persons at a time, the club boasts the "longest bar in the Pacific" which is famed for serving the coldest "liquid refreshments" in the Philippines. In addition to the EM club, the battalion has set up a well-stocked library, hobby shop, athletic gear locker and out-door movies for battalion personnel.

MCB-5 returned to the Construction Battalion Center at Port Hueneme in the first week of April. During the next three months it had some well earned leave, and then began training and preparatory work in connection with another deployment. The Fifth Bees don't waste any time—they are now on Guam where they relieved MCB-11.

MCB-9 at Alaska

IN MARCH 1958, Mobile Construction Battalion nine landed in Alaska. The main body was assigned to the Naval Station at Kodiak, while Detachment Alfa went to NavSta Adak, in the Aleutians.

The construction activities on these two islands were hampered by wet and inclement weather. Despite the adverse conditions, the two construction groups of MCB-9 fulfilled their assigned tasks on schedule and continued to uphold their "Can Do" reputation.

At Kodiak, the drivers and mechanics of the main body operated a quarry, rock crusher and asphalt plant in connection with the rehabilitation of two concrete runways. This runway project consisted of covering 167,500 square yards of concrete with three and one half inches of asphaltic concrete. Working in two 12-hour shifts, seven days a week, the Bees were paving the runways every hour that they were dry. It took them just two months to complete this round-the-clock operation.

Bridge-building was on the agenda for the steelworkers and utilities men of MCB-9. The bridge, prefabricated back at Port Hueneme, was erected to carry a 16-inch water line over the Buskin River.

Other projects on Kodiak included a steam-heated garage which houses five ambulances, and the erection of four small concrete structures to house scientific equipment.

The heavy builders had their day on the major reconstruction of the 1800-foot marginal pier. They removed and replaced all decking and bullrail, relocated utility outlets, reset cleats and bollards, replaced 60 bearing and fender piles and replaced much of the structural bracing under the pier.

This same crew completely rebuilt the transit warehouse and also made improvements to the EM Club. The SWs, CEs, and BUs completed an interim special storage facility which involved security fencing, lookout tower, flood-lighting, general house and gate house.

The UTs replaced 3195 feet of underground steam lines to the aviation gas tank farm with new, above-ground pipe on steel supports.

The main body of MCB-9 also constructed a permanent special weapons storage facility. This included a 5000-square-foot heavy concrete multicubicle storage building, 300 linear feet of security fence, earth revetments for blast protection, gate security house and alarm control building, underground electric power ducts and perimeter flood-lighting of the storage area.

MEANWHILE, on Adak, Detachment Alfa was busy completing all assigned projects, plus a few extras—in spite of the windy and wet Aleutian weather. The main project they undertook consisted of building two heavy reinforced concrete bridges at the traffic circle. This turned out to be an all-hands effort which was carried out on a

SAME PLACES—Seabees have returned to many islands where they made WW II history, to improve present-day naval facilities in these Pacific islands.

HOME WORK—Peacetime jobs of Navy Construction Battalions included housing projects such as this on Guam.

round-the-clock basis for three months.

One of the bridges was a 44-foot span while the other was 66 feet. Over 640 cubic yards of concrete was used in building these two bridges. Other phases of heavy construction on this project included pile driving and cofferdam construction and dewatering, as well as heavy concrete form erection, earth-moving and the replacement of 200 tons of reinforcing steel.

The two bridges were located in the heart of the station and the Bees had more than their normal share of "sidewalk superintendents."

Alfa's builders also erected a new pump station building for aviation gasoline, built an addition to the station's chapel and undertook many other building and repair jobs.

The UTs installed 3000 feet of 10-inch water main and also replaced the plumbing in 24 sets of quarters.

The CEs had several sizable jobs too. They replaced the complete lighting for all airfield runways and taxiways with an improved high-intensity system, and they installed three miles of new telephone cable and rehabilitated 23,000 feet of power distribution lines.

After returning home for a month or two of liberty and leave, the battalion boarded USNS *General Hugh J. Gaffey* for Okinawa. Upon arrival, they immediately began to rebuild Camp Kue, a WW II quonset hut Army camp, where the battalion is now quartered.

The Bees are entirely self-supporting at Camp Kue with their own galley and mess hall, administrative offices, EM Club, medical and dental facilities, chapel, post office, armory and barber shop.

MCB-9 is on Okinawa to construct permanent staging-out facilities for the Marine Corps at Sukiran. This project will require about 18 months of work. The Ninth Battalion will do the initial phase during its nine-month deployment, while another unit will relieve it in late October and remain to complete the job.

The Sukiran project includes construction of five warehouses of 40,000 square feet each, two engineering shops of 10,000 square feet each and three other shop buildings, complete with area grading, drainage, utilities, distribution, paved roads and paved parking area. The structures are of the most modern concrete design with pre-cast tilt-up wall panels and pre-cast roof panels.

This project constitutes a challenge to the officers and men of MCB-9, as it requires many construction techniques in which the battalion has not had previous experience. However, judging from the record of MCB-9 on previous deployments, plus special training in tilt-up construction and pre-deployment planning, there is no question that they will complete their portion of the Sukiran project "on schedule."

MCB-10 at Guam

EARLY THIS YEAR, on 25 January to be exact, MCB-10 returned to Port Hueneme after being home-based on Guam for the past six years. This marked the first time that MCB-10 had deployed as a unit since it was commissioned on Guam in October 1952.

MCB-10 had been activated when the 103rd Naval Construction Battalion, the Navy's oldest battalion in continuous service, was disestablished. Newly formed MCB-10 inherited many of the men and much of the spirit and traditions of the old 103rd.

During the six years it was based on Guam, MCB-10 undertook and accomplished many varied assignments. Its first large-scale project was a replacement housing program which included the construction of more than 1400 units on Guam and Kwajalein.

The Bees of the 10th Battalion also tackled the wharf project at NSD, Agana. This job, shunned by other construction organizations on Guam because of its complex nature, was undertaken by the men of MCB-10 with their usual spirit and zeal.

They finished this "toughie" in record time and then started another at nearby NAS Agana. This, the largest project ever undertaken by MCB-10, was completed in less than five months. Thanks to the 10th Bees, NAS Agana now has one of the most modern airfields in the Pacific.

Last year, Detachment Alfa, consisting of 60 men, spent four months at Ulithi, in the Caroline Islands, resurfacing an air strip for the Coast Guard.

Meanwhile, other MCB-10 personnel were at work building a swimming pool and bathhouse at Nimitz

Builder (BU)

Construction Electrician (CE)

Surveyor (SV)

Hill. The "tar babies" of the battalion were not idle either, as they had the job of reroofing the NavSta galley and barracks.

During its six-year stay on Guam, MCB-10 was gradually becoming one of the island's permanent naval activities. This fact was recognized by Commander Naval Construction Forces Pacific as being an impairment to the mobility for which the Battalion was designed. As a result, its homeport was changed from Guam to Port Hueneme so it could join the Pacific Fleet's four other rotating battalions home-based there.

This move presented many problems for the Battalion. With assistance from COMSERVPAC, arrangements were made with EPDOPAC to transfer MCB-10 personnel who wanted to complete their tours on Guam, to other activities based there. Transportation was arranged for the entire Battalion, and the families of MCB-10 personnel that were on Guam traveled back to the states with them on the same ship.

Shipboard parties, games and movies, intermingled with some necessary administrative work, killed time during the two-week cruise back to California. The main body was met at Port Hueneme by the officers and men of the advance party who had returned earlier to set up training programs and prepare for the battalion's homecoming.

The various departments of the Construction Battalion Center worked with the advance party to insure that the homecoming was a pleasant one. Housing was immediately available for all arriving families. Transportation arrangements were made for people going on leave. They arrived on a Sunday, and special arrangements were made to open the Exchange, Commissary and other facilities at the Center which are normally closed that day.

In the states once again, the battalion was subjected to an extensive military training program, and its personnel participated in various technical training classes set up to prepare them for their next deployment to Adak and Kodiak—which are a far cry from Guam.

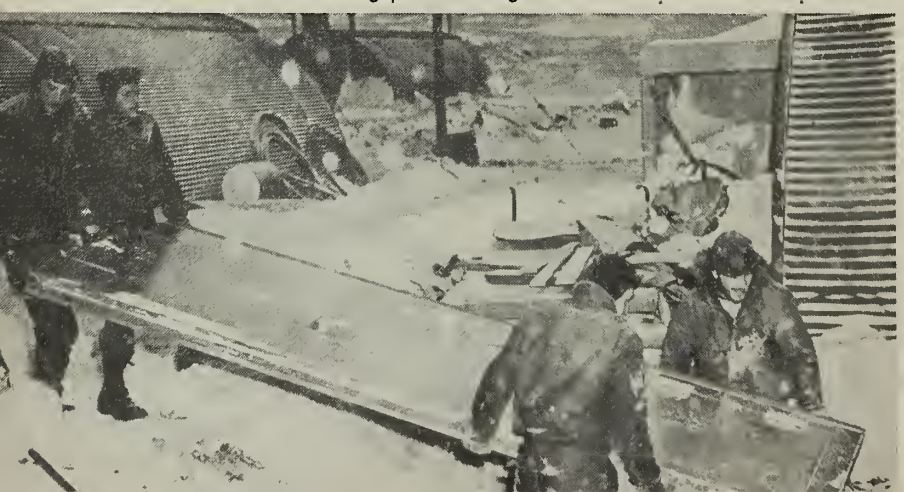
MCB-11 Takes Over

WHEN THE 10th Bees departed from Guam the men of MCB-11, the youngest of the Pacific's five battalions, moved in. Upon their arrival they immediately started working in areas where many, many thousands of Seabees previously had toiled. In fact, MCB-11 is hauling coral from one of the original wartime borrow pits. They are reminded daily of the tragedy of war as they work near some natural caves which were used by enemy forces in WW II.

One of MCB-11's three major projects on Guam has been the operation of several facilities in an area called Fadian Point. Seabees there are operating a large rock quarry in which coral rock is blasted loose to be used in making sand and coarse aggregate. From this, concrete block and pipe, as well as ready mix concrete, are made. This operation involves the use of two large, three-jaw rock crushers and five roll-type crushers.

The quarry is about 250 yards

WAY DOWN SOUTH—A big job building bases for Operation Deep Freeze.



from the crushing unit, and rock is hauled from the quarry to the crusher in 15-ton capacity rock-body dump trucks. The crushing machines produce sand and various sizes of aggregate.

The Battalion operates a concrete batch plant in which aggregate, cement and water are carefully blended to produce concrete for several of its projects on Guam. Carrying out the "Can Do" spirit of the Seabees, the men of Eleven also deliver the ready-mixed concrete in transit-mix trucks.

The block plant, also located at Fadian Point, produces about 5000 blocks each working day. The men of MCB-11 operate the steam boilers which produce the steam used to hasten the curing of the blocks as they set overnight in closed quonset huts. (Incidentally, the Seabees have set up a laundry in an adjacent building to take advantage of the steam and hot water produced by the same boilers that cure the blocks.) More than 12 different types of blocks are being produced and before it's through, MCB-11 will cast more than 875,000 blocks required to complete its projects on Guam.

Another unusual part of the Fadian Point operation is the manufacture of reinforced concrete pipe. The pipe is cast on Guam, rather than purchased in the states, because of the high shipping cost and possible breakage. The pipe plant operates on a two-shift basis and turns out pipe in sizes varying from six to 48 inches in diameter.

At first glance this pipe-making may seem easy, but it actually requires considerable skill and knowledge to blend the mixture of sand, crushed rock, cement and water in the proper proportions so the pipe walls will leave the forms in a smooth and compact condition with the wire mesh reinforcement properly centered.

The actual crushing of the rock is conducted on a large scale. The ingenuity of the Seabees was exercised here when provisions were made to "scalp" off rain-wet fine aggregate which would clog the screens if allowed to progress through the series of crushers. One of MCB-11's more industrious minded Seabees devised the method to correct the clogging of the fine aggregate, so the main plant can now operate "come rain or shine."

The construction of additional public quarters on Guam has been assigned to the 11th Battalion. Work on this project includes excavating for foundations and concrete floor slabs, placement and compaction of coral base material, installation of electrical, water and sewer services, and the laying of concrete blocks.

THEN THERE'S the naval magazine project which calls for construction of various buildings, as well as reinforced concrete magazines, roads, fences, bridges and utility systems. A concrete batching plant was erected to furnish concrete for these buildings. The work continued, in, under, over and around the numerous natural caves which were used by the Japanese after their invasion of Guam.

Healthy respect was given to the caves and to the dangers involved in working heavy equipment in the cave areas.

The Bees of MCB-11 went to Guam after being deployed to Cubi Point in the Philippines. Recreational activities on Guam were not too good when you consider that the majority of the Bees are single men who would rather be assigned to a base across the street from a women's college. Although they could build the college, they couldn't dig up the girls to attend, so they resorted to athletics, such as swimming, bowling, fishing, and water skiing to occupy their spare time.

All this is gone now, as the 11th Bees departed from Duva Duva on 11 June and headed back to Port Hueneme, via Hawaii. After leave and much swapping of sea stories, they are now finishing up five weeks of technical training. They have five or six weeks of military training scheduled, and then they'll pack up and move again. This time MCB-11 will be bound for Okinawa where it will relieve MCB-9.

Thats' not, by any means, the whole Seabee story, but it will give you an idea of the versatility of this colorful Navy outfit.

—H. George Baker, JOC, USN

Steel Worker (SW)

Construction Mechanic (CM)

Equipment Operator (EO)

Learning Navy ABC's

TAKE AN EXISTING naval activity. Consider the effect mobilization would have on this activity in the event of a national emergency. Then work out a plan for enlarging the activity to meet these mobilization needs.

If you had been a member of an *Advanced Base Command Division* in the Naval Reserve during 1958-59, you'd have spent many drill nights sweating out this problem.

ABC unit members are currently working on a three-phase curriculum. The first phase, hinted at above, has been completed and is now being "critiqued" by experienced ABC officers and BuDocks personnel.

Phase I—the Roosevelt Roads Problem—concerned the over-all task of enlarging NavSta Roosevelt Roads, Puerto Rico, in the event of mobilization. While the problem centered on a particular location, it was not "provincial" since the means employed to solve the problem will apply in general to any base development; the only variables would be climate, terrain and type of mission.

Phase II, to be completed in the next 12 months, deals with disaster relief and atomic, biological and chemical warfare. *Phase III*, scheduled for 1960-61, involves the planning of "Base Tart"—a naval station and airfield.

The Advanced Base Command Program of the Naval Reserve consists of 25 units. There are 14 *Acorn* command divisions, seven *Cub* command divisions and four *Lion* command divisions.

- The allowance for a *Lion* division includes billets for Reservists available for assignment to establish a *large advanced base.*
- A Cub, as its name implies, is slated for assignment to establish a *medium sized advanced base.*
- Acorn divisions include billets for men available for assignment to establish a *naval air base in an advanced area.*

ABC division members attend 48 drills and are required to perform two weeks' active duty for training (ACDUTRA) each year. On drill nights, instruction includes lectures, group discussions and practical problems dealing with the various phases of planning, organization, administration and operation of advanced bases. All training is geared to the carefully planned three-year curriculum.

The Roosevelt Roads Problem consisted of 14 topics and provided training for 65 drill nights. The first topic, naturally, presented background information. It dealt with the history, cultural and industrial development of Puerto Rico and summarized the curriculum for the problem. The next five topics concerned the "Navy Administrator." Conferences and committees, management training, production planning and control were among the subjects covered. Next came the operating aspects, involving three topics: Navy acquisitions of property, Fleet aircraft maintenance systems and afloat operations at Roosevelt Roads. Some 46 drills were devoted to the base development problem itself. The last few drills were spent in analyzing, criticizing and reevaluating the solution.

As a final training check, highly qualified officer members of ABC divisions have been ordered to BuDocks for two weeks of ACDUTRA. Under the guidance of BuDocks specialists and CNO and CNP representatives, these officers—working in two-man teams—are studying the solutions submitted by each division. Following the analysis of the critiquing officers, the Advanced Base Plans Branch of BuDocks evaluates and grades the solutions. The solutions are then returned to the divisions for their review and re-evaluation of the results.

ABC division members are now hard at work on Phase II—disaster relief and atomic, biological and chemical warfare. Among the subjects to be covered are the following: Characteristics and effects of nuclear, biological and chemical warfare; characteristics and effects of natural disasters; the size and characteristics of fires; and base planning to minimize the effects of attacks and disasters.

Other topics include disaster psychology, evacuation of a distressed area, recovery from effects of disaster, training and readiness of personnel. The final section of Phase

GROUNDWORK—Naval Reserve Advanced Base Command units have spent a busy year working on expanding a base in case of emergency mobilization.

READY TO ROLL—Drills and AcDuTra keep ABC Reserve units ready if called upon to help set up advanced bases.

II training covers the departmental responsibilities at time of disaster. This includes operations, public works, communications, transportation, medical, supply, ordnance and personnel.

The final phase of the three-part curriculum will consist of planning a naval station and airfield—"Base Tart"—in a sub-Arctic area.

Material in this phase is divided into six sections. The first section is introductory and provides background material about the Arctic and sub-Arctic regions. The second section deals with specific information concerning "Tart." The facilities to be built and the components necessary to build them are covered in section three. The staffing of the base and logistic support is included in section four. Section five contains the "problem" and includes the development, operation and defense of the base. The final section provides for an analysis and critique of the problem.

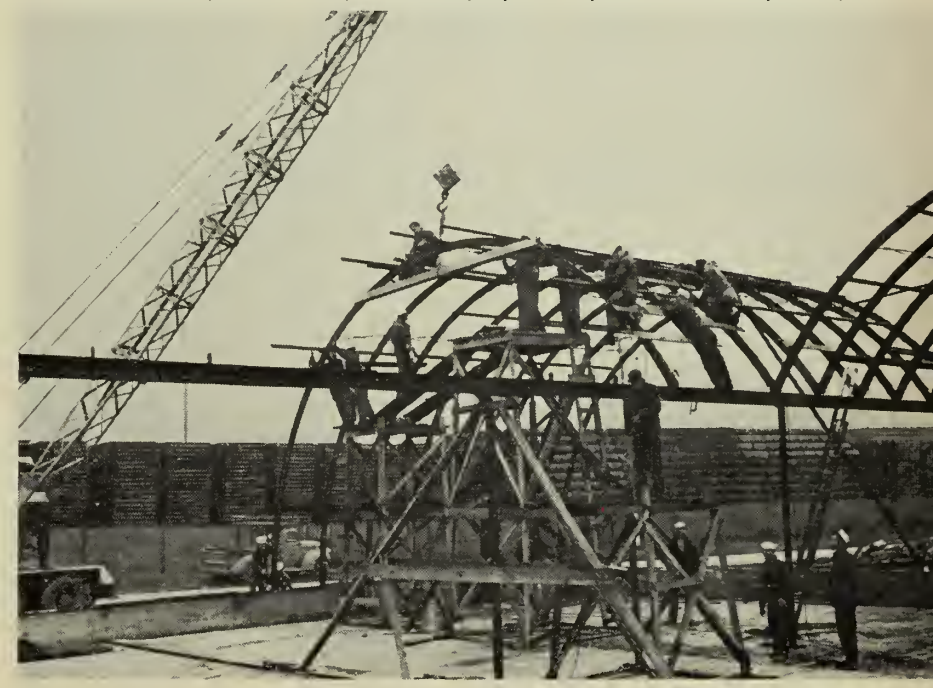
Whenever possible, ACDUTRA for ABC division members parallels the curriculum phase under study. Members of some divisions were able to do on-the-spot research at Roosevelt Roads, for example.

There is more to advanced base operations, however, than the planning and administration handled by Advanced Base Command divisions. Before the base is ready for Fleet or air operational commitments, lots of construction work must be completed. Enter the Seabees.

In a national emergency, Mobile Construction Battalions would be deployed to carry out construction projects at these advanced bases. Reserve Seabees would, of course, be assigned to MCBs.

The training of Reserve Seabees emphasizes practical experience in all phases of construction work. In the event of mobilization, USNR CEC officers and Group VIII en-

KNOW HOW CAN DO—ABC division members attend 48 drills and two weeks' active duty training a year to keep up in all phases of their specialty.



CLEARING THE WAY—Many skills are needed in the construction of a Navy base. Here, equipment operators clear the way for other ABC men to move in.

THIRST QUENCHERS—Setting up an advanced base can include problems such as building water-purifying systems like these Reservists have made.

listed Reservists will be available to form and augment the Navy's Civil Engineer Corps and the Construction Battalion organizations.

There are now 225 of the authorized 229 Reserve Seabee divisions drilling regularly. Units are located in all naval districts except the 10th, 15th and 17th.

Among the ratings you'll find in Seabee units are surveyor, storekeeper (technical), construction electrician (general and power lineman), equipment operator, mechanic (diesel and gasoline engine), builder (light and heavy construction), steelworker, utilities man and yeoman.

Many Seabee divisions make use of the "multiple drill" for training purposes. Instead of drilling one night a week, they drill one weekend a month. Annual active duty for training may be performed with regular Mobile Construction Battalions. ACDUTRA is also provided at many naval bases. In addition, some Seabee units take on community projects—such as the building or renovation of Scout camps, recreational areas, and the like—as their ACDUTRA.

Care is taken to see that "production" does not overshadow training. Reserve Seabees are checked out in the practical factors of their ratings. A builder, for example, might be a bricklayer in civilian life. If he spent his ACDUTRA tour laying bricks, he would "produce" but he would not be getting the training needed to round out his qualifications.

So our builder must become familiar with the carpenter's kit, the dock builder's kit and the concrete worker's kit. He must be able to operate all sorts of shop equipment, including fixed and portable power-driven gear. He must know about paints, varnishes, thinners, primers and preservatives, hoisting equipment and tackle; he must be able to read and work from simple drawings and sketches, from building plans and specifications. He must know how to prepare sketches for carpentry and concrete form work. And he must demonstrate his knowledge and proficiency in all of these fields.

A good slogan for these ABC divisions and Seabee Reservists would be "Preparedness Through Training." As a matter of fact, that slogan applies to all Reserve training programs. If the mobilization order comes, there will be thousands of Reservists ready to take their places alongside the Regular Navymen.

Good Deed — Good Duty

ONE OF THE MOST unlikely spots to find "fighting Seabee" units sharpening their wartime skills would appear to be a Boy Scout campsite high in California's Santa Cruz Mountains. However, this is exactly what three Naval Reserve Seabee Divisions from the Twelfth Naval District are doing. At this location they're keeping up in the jobs of their ratings, while constructing a camp for Boy Scouts.

"The wild, almost inaccessible area in which the camp is located makes it comparable to an advanced area project which we would probably handle in a wartime situation," says a commander of one of the Seabee Divisions. "This provides training of greatest value to our Reserve units."

Moving in with hammers and bulldozers, the 140 officers and men of Alameda Seabee Divisions 12-3, 12-4, and 12-8 spent their monthly training weekends last summer and fall on the site doing outdoor laboratory and class work, using their building know-how in constructing a rustic lodge, cabins, and other necessary camp structures. They have returned this year on the same weekend basis.

Working eight hours a day—Saturday and Sunday—alternately one weekend each month for each Seabee Division, these civilian-Navymen put in many man-hours in the period they were on the spot. Their time was divided between actual construction, on the job training, and classroom theory.

Dining room tables and chairs and tables were built during the past winter at regular meetings of the units in Alameda. Among items still to be constructed are 24 cabins and three more water tanks.

Helping the Seabee Reserves have been civilian architects, contractors, electricians, painters and merchants. Gifts of lumber, paint and concrete have been presented.

Thousands of young scouts will benefit this year and in years to come from the Seabees' "can do spirit." At the same time these Navymen have become more proficient as a part of the U. S. defense team.

RESERVE Utilitymen get practical experience while building BSA camp.

CB BUILDERS show can do. *Below:* Construction crew works out problem.

MAIN LODGE shapes up under capable hands of Reserve Seabee Divisions.

BU Builder

SV Surveyor

EO Equipment Operator

SW Steelworker

CE Construction Electrician

Seabee College Has the

DURING WORLD WAR II the Navy brought construction men into the Navy and, depending on their skill and experience, assigned them rates in the appropriate rating structure from seaman to chief petty officer. These were the "Can Do" Seabees—a hard-working, hard-fighting, know-how group of men who became quite famous during the war years.

Today the Navy no longer takes construction men and makes Navymen of them. Instead, it takes Navymen and transforms them into skilled construction men.

This transformation takes place at Port Hueneme, Calif., the U. S. Navy's only BuPers-controlled construction schools. CDR LaVern Pyles, CEC, USN, present commanding officer of the so-called Seabee College, has under him a Builders School (Class A and B), Steelworkers School (C and B), Equipment Operators School (A, B and C), Construction Mechanics School (A), Utilities Man School (A and B), Surveyors School (A), Construction Electricians School (A and B); Draftsman School (A and B), and an equipment maintenance department.

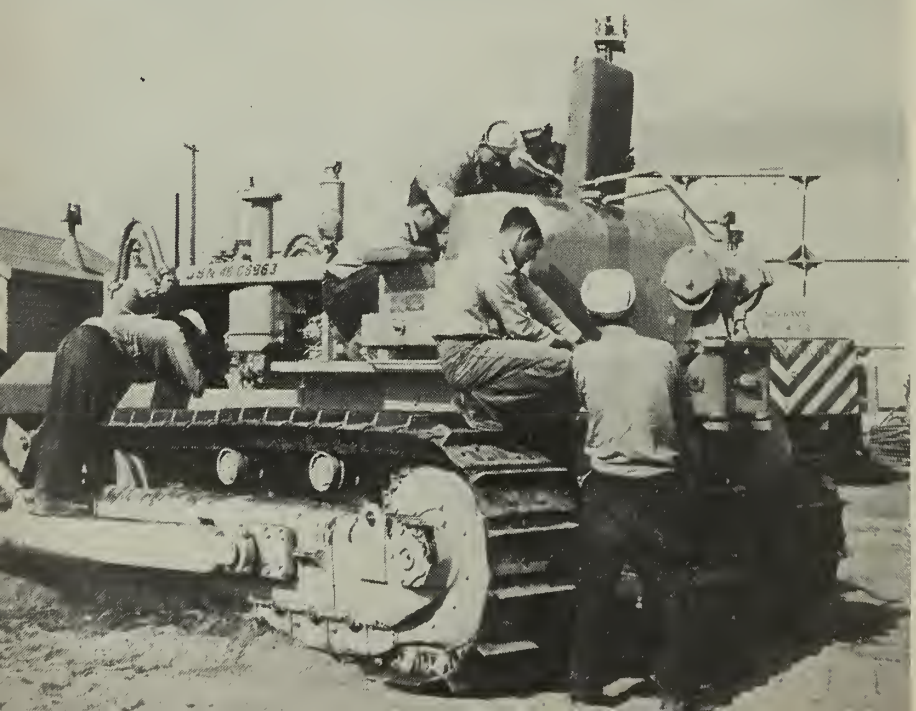
The Class C Schools for EOs and CMs are combined under a unit entitled "Advanced Equipment Operator and Maintenance Course."

ALL OF THESE SCHOOLS work together in turning out skilled men to make up the Seabee organization. At Port Hueneme men learn to perform every type of construction work from blazing an arctic trail to building a tropical base.

The students perform actual construction work right at the school. A good example of this occurred when an equipment maintenance building for the CM school was needed. After plans were completed and the site approved, Surveyors laid out the area and set grade stakes; Equipment Operators moved in and compacted fill material; Builders formed the footing, and poured and finished the concrete in the floor slab; Steelworkers helped reinforce the concrete and then assembled and erected the steel building—making necessary modifications as required. Construction Electricians installed the lighting, while the Utilities Men installed the required water and heating facilities. The Builders put on the finishing touches.

This, and other similar projects, have continually improved the facilities at NAVSCON. Students have constructed the Builder, Surveyor and Draftsman school offices and classroom building, a new utilities shop building and a new welding area. Recently, a new NAVSCON library building, equipped with technical trade reference books was completed.

DOZING ON DUTY—CMs make adjustments on bulldozer at Port Hueneme.



THE ADMINISTRATIVE CENTER and hub of all this is popularly called The Little White House. This structure erected by the Seabees contains the command and central administrative offices.

The school closest to the "Admin" building is the Builders school.

Here, at the Builder third and second class level, the rating is divided into three separate specialties: BUL (light), BUH (heavy), and BUR (concrete). These men learn to do a variety of work at the school.

In the concrete area students set forms for footings and foundations, pour and finish floor slabs, and strip forms from completed work. A masonry class teaches them how to lay concrete blocks.

To the right of the concrete area, other builder students, who have literally learned framing from the ground up, put sub-flooring on the foundations which had been poured by the concrete class. Some advanced

Utilities Man

CM Construction Mechanic

Spirit

students do the more complicated rafter cuts and scaffolding — after having already completed the design, material take-offs and estimating.

Close by, some other BU students install various roofing materials. Others prime and paint the interior of a shop.

In the background, gin poles, shears and tripods (items used in hoisting) are erected. Adjacent to this rigging area students put up prefabricated buildings while still another group works on a timber trestle bridge.

Near by, students are learning sawmill operations. The Builder must learn to make use of the raw material he finds at hand. A sawmill is quite handy if he has trees and needs lumber.

IN THE WESTERN AREA, which is generally reserved for the Equipment Operator and Construction Mechanic ratings, Builder students become acquainted with pile-driving operations in a specially prepared pool area. They learn to set piles, drive them, and build piers and bridges to land men and equipment on beachheads and inaccessible areas.

In the carpenter shops, BU students learn how to operate all types of wood-working machinery. But their instruction is not confined to the shops and field. In the classrooms BUs are taught mathematics, blueprint reading, and the use of hand tools and materials. Class "A" Builder graduates are not accomplished mechanics in all phases of building, but when they arrive in a Mobile Construction Battalion, they can be assigned to any task covered during their training and do a good job.

The Officer-in-Charge of the Builders school is also in charge of the Steelworkers school.

There the SWs have an oxy-acetylene manifold which can supply gas for 32 welders and 12 to 15 burners at a time.

The metal working and heat treating area is close by. There the students make small hand tools and use the electric oven to heat treat them.

IN THE SHEET METAL shop all sorts of metal working machines are used by students. Nearby, in the reinforcing section, SW students make some weird looking products conjured up in the nimble minds of their instructors, and in the steel erection area the embryo SWs are taught to use gin poles, tripods, shears, pontoons, tower legs, and to erect Butler buildings.

Twenty-one SWs at one time can work in the rigging department learning to splice wire rope. In the fiber line (or blister) department, students must work fast and well. To make a 100 per cent grade here, they must tie 10 knots in 50 seconds and make a perfect long splice, eye splice, short splice, and back splice. Each student's life may depend on the quality of his splices. When he works on the top of the 75-foot steel tower, his safety belt has one of his eye splices on each end.

A lot of preliminary work has to be done on most construction jobs. In another part of the school, a mile or so from the Little White House, men are taught to do much of this.

There, in the dust-enveloped obstacle course, the Equipment Operator and Construction Mechanics reign supreme. The mechanics' symphony of well-tuned engines works in harmony. It had better, because the machines represent an investment of more than three million dollars.

Motorized scrapers and other heavy earth-moving equipment are common sights there. Instructors are always close by and ready to help the inexperienced trainees.

One group of men here are in the class "A" truck phase. Each of the trucks which maneuver over the obstacle course is equipped with a radio receiver. The truck drivers get directions from an instructor standing in a nearby tower. Another instructor, who rides in the cab with each student, also aids in the training.

On the other side of the field a group of mechanic students adjust the fuel pump on a tractor. The instructor has shown them that the fuel pump lifter yoke adjustment must be within .001 of an inch of the manufacturer's specifications for that diesel engine. The students also make adjustments on the fuel controls and governor linkage to make sure the engine maintains the correct speeds, to prolong its life.

SEE-SAW—Builders receive practical instruction in class on carpentry.

STEELING THE SHOW—Steel Workers assemble reinforcement for concrete.

MUCH OF THE ACTUAL operational experience gained by students is received on location at the Rose Valley training division. The camp is hot in the summer and cold and snowy in the winter, but students really enjoy the rough, tough type of training. They work from dawn to dusk on their projects. They practice everything from advanced blasting techniques to the operation of all types of heavy equipment.

The Rose Valley program is operated in conjunction with the U. S. Forest Service and Department of Agriculture on a permit agreement. The training projects are well planned to benefit the Navy as well as the Forest Service by providing better roads, new campsites, fire trails, heliports and impounded water areas for fishing and general recreation. The Seabee schools gain by giving students on-the-job training. Construction machinery is subject to wear and breaks down.

ANOTHER TRAINING PROGRAM well taken care of at Port Hueneme is in the CE-Construction Electrician-rating.

Electricity is a complicated subject for most men. Yet in three weeks at the Seabee school, students with no more knowledge of electricity than knowing that it comes from an outlet in the wall, learn about electricity—ranging from the simple glass rod rubbed on a piece of fur to the intricacies of *inductance, capacitance,* and *impedance.*

After he gets this basic background, the student should be prepared to progress through further training in fields of the CE rating.

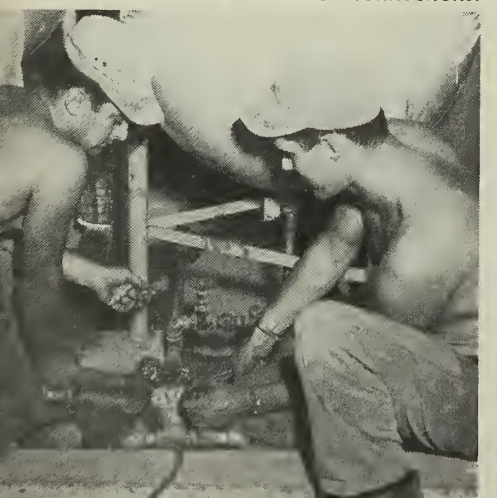
One of these fields is motors and generators. The CEs must learn about various types of AC and DC motors — their characteristics and uses, trouble-shooting and repairs. Instructors deliberately put "bugs" in the motors and students must locate and correct them. As a final test these students are required to start, operate and synchronize diesel-driven generators under field conditions.

From motors and generators the CE students go on to the "pole line" phase of their training. There they learn a lineman's work, which includes power transmission and distribution. After three days, students on the poles are proficient enough to do simple work aloft. A group of beginners on a 15-foot pole may play "pole ball," a game which consists of tossing a ball back and forth —on a pole. In order to catch and throw the ball, they must rely completely on their "hooks" (climbers) and "scare straps" (safety belts). One of the final tests in pole line work is pole-top rescue and life saving.

In the communications phase of training, the CE students take up telephony.

In interior wiring, they cover electrical circuits, wiring and motor control conduit work, and learn what materials and methods they should use. As a test, a group of men must wire a cubicle mock-up of a two-story house, complete with a three-location light control.

UTILITIES MEN make connections.



THE UTILITIES MAN school has a unique problem in training, for the various phases of the UT rating are completely unrelated to one another. New students usually begin with plumbing. In this class, they are taught such things as basic mathematics and how to read plumbing plans. Then they proceed to the shop where they are taught pipe-cutting and joint-fitting. The final project in this phase comes after about three weeks, when each student must make a complicated figure using standard pipe and fittings. This tests their ability to read and work from blueprints and to measure, cut and thread pipe to exact dimensions. In one exercise, students install a complete bathroom in a mock building.

In the refrigeration phase, UTs learn about the refrigeration cycle and what makes refrigerators work. The men actually make ice cream and sample their product. Needless to say, this course is quite popular.

In other classes, UTs study everything about boilers. During the course, they light off stationary boilers, replace boiler tubes, and lay fire brick.

The final part of the course for UTs is the water treatment class, where they actually purify and distill water under field conditions. They test it, chlorinate it, and even go to the seashore to distill salt water to make pure drinking water. This salt water is turned into a product so pure that most of it is used at the Station Hospital. Battery shops also get some of it.

WHILE THE UTs are at work, so are the SVs. Surveyors are usually the first men on the job in advanced base construction, since they make the initial or reconnaissance survey. The training of SVs at Port Hueneme includes some classroom instruction and drafting, supplemented by a great deal of field work under varied conditions. The nearby terrain, which ranges from the shoreline of the Hueneme harbor to the flat Oxnard plain, to the rugged, mountainous area in the higher elevations of the Los Padres National Forest, makes a good outdoor classroom.

The SV class starts its training with a two-week introduction. This

includes the various types of surveys and sources of information and familiarization with the essentials of field work, notekeeping and types of surveying instruments. Here the emphasis is on basic drafting, lettering and blueprint reading, as well as mathematics and use of the slide rule.

From this beginning, students progress to such studies as the measurement of horizontal distances, the determination of direction and the measurement of differences in elevation. During these classes over 50 per cent of the time is spent in the field, where the principles learned in the classroom are put into practice.

Most of us know directions—above and below, fore and aft and port and starboard—but a surveying student must learn to master such complicated principles of direction as line of reference, azimuth, bearings and magnetic declinations with their solar-diurnal variations. They also have to be able to interpret isogonic (equiangular) charts.

In addition, the SVs learn the functions and limitations of the surveyor's compass, compass traversing and plotting. This is followed by a thorough study of the engineer's transit—the universal surveyor's instrument—and its use in making surveys and calculating land area. SVs then go on to the various types of levels and their uses. They also learn to determine elevations by differential leveling.

After they complete these phases of the curriculum, they begin the so-called applied work. First, they learn to make topographic surveys.

NEXT ON THE STUDY MENU is construction surveying. For many students this is the most interesting part of their training. The laying out of roads and the location of buildings and utility lines are the primary subjects taught in this phase. The students also learn about slope stakes, offset center lines, batten boards and grades.

As a conclusion to the course, a short time is spent studying the purposes and methods of making hydrographic surveys.

Even after he completes the course, a student is not an expert in all the areas he has studied. But—he does have the basic training he needs in the various fields of surveying and will become proficient through actual on-the-job experience and more advanced training.

LAST BUT NOT LEAST of Port Hueneme's activities is the Draftsman School.

Although DMs are not a Group VIII (Construction) rating, they are often assigned to Mobile Construction Battalions, and graduate draftsman are always in demand for training aids jobs in the Seabee schools. So, it's appropriate for them to get their training with the Seabees.

A new class of draftsmen is first acquainted with the tools of the trade, such as proportional dividers, planimeters, pantographs, beam compasses and electric ratio projectors.

After this, the class works with projections, free-hand sketching and auxiliary views for about four weeks.

Next, the students study the various types of drafting—architectural, mechanical, electrical, structural, machine, topographic and hydrographic.

During the architectural course, DMs draft a complete plan for a residential unit. In the electrical and mechanical phases, they draw up the interior wiring, plumbing fixtures and piping for the unit.

Plans for bridges are done during the structural drafting course, and during another course, drawings of various machine parts and assemblies are made, complete with dimensions, tolerances and finish marks.

The next area covered by the DM student is topographic and hydrographic drafting. In this course, surveying notes are reduced to drawings on grids, and a ship's course is plotted over a given route.

POLE VOLTING—CEs work on line.

Illustrating is the last subject in the DM curriculum. There is very little emphasis here on artistic, free-hand drawings. Instead, the students draw various charts, graphs and fine lettering plates. They also learn how to illustrate graphically an accumulation of data and study various methods of reproduction.

At the end of 12 weeks—having drawn some 50 plates and learned drawing techniques, basic terminology and fundamentals for each field or area covered in the curriculum—the DM students graduate, well prepared to do the work of a Navy Draftsman.

They are not expected to be experts just yet, but they are on their way. They will be experts—someday. And the same goes for all the Seabees trained at NAVSCON.

—Erwin A. Sharp, JO1, USN.

ON THE BEAM—Equipment Operator mans crane to move support into place.

Round-the-World in a DE

DEEP FREEZE *IV was a cruise of extremes, according to sailors of* USS Brough *(DE 148).*

They claim to have met some of the roughest weather (at their picket station, 60° South, 170° East) and some of the nicest people (New Zealanders) in the world. And they are quite prepared to back their claims.

After Brough *returned from Deep Freeze early this year — her third winter season way down under, she circled the world alone. Records indicate that* Brough *was the first DE ever to make a round-the-world cruise alone.*

Under skipper LCDR B. E. Boney, USN, *the crew of* Brough, *during one stretch, spent 75 of 82 days at sea. Part of their job on station was to report weather for Air Force and Navy pilots—and they had plenty of it to report.*

During one period, Brough *men saw only one of the more than 100 flights which passed overhead. Forty degree rolls were not uncommon for the DE—50 was about tops.*

*To balance the picture, Dunedin, New Zealand (*Brough's *home port for Deep Freeze), became a real home away from home. The crew responded by establishing a spotless record on the beach. During the year, six men, including the Engineer Officer, were married in Dunedin. Several others became engaged.*

As a measure of the friendships which grew up, over 4000 Kiwis (New Zealanders) crowded the pier on February 7 to say goodbye as Brough *left for home.*

Here is how one crew member of Brough *remembers the cruise:*

• *23 Aug 1958—Brough* slipped quietly away from her pier in Key West, Fla., home of Destroyer Division 601. A few wives and officers from the Division saw her off. A Navy band played "Anchors Aweigh" in the torrid Florida sun. As *Brough* slid out, the ships of the division sounded their whistles in a farewell salute.

As we passed main base, a signal came from our old running mate USS *Howard D. Crow* (DE 252). She referred to newspaper articles about *Brough's* forthcoming cruise: ". . . BYE LITTLE BROUGH."

Brough was off for an eight-month cruise, bound to operate independently and cross all the world's meridians, alone.

• *26-29 Aug*—Before the long Pacific crossing began, the ship stopped at Rodman, Panama Canal Zone, for last-minute supplies.

• *1 Sep—Brough* crossed the Equator. Much screaming and wailing was evident as a two-day indoctrination of the "slimy Pollywogs" was inflicted by the "trusty Shellbacks." A lavish display of garb was seen, and many interesting instruments were noted.

• *22 Sep — Brough* arrived in Dunedin, N.Z., and was greeted by the Mayor and Rear Admiral George J. Dufek, the boss of Operation Deep Freeze. Following an inspection, the crew disappeared down Dunedin's welcome and familiar streets, renewing old friendships and acquaintances. One man was married during the first week, with several others to follow during the year.

The next morning's paper had this headline: *"Brough*—An Old Friend." We were glad to be back and Dunedin was glad to see us.

• *26 Sep-23 Oct*—We went to station (at Latitude 60° South, Longitude 170° East) for our first Deep Freeze IV picket. Sailors on their first cruise didn't have to wait long to see the weather the old timers had been telling them about. From channel entrance all the way to station the ship fought against the towering waves which pounded the ship steadily. (There they found some of the world's worst weather, in the aptly named "Furious Fifties.") On station, since we slowed to one-third, the pounding and violent motion abates, and we were introduced to deep troughs and heavy rolls. Fifty degrees was our best, but over 40 became a common occurrence.

On the way to station, we stopped (not wishing to be hemmed in by even worse weather) at the desolate New Zealand weather and scientific station on lonely Campbell Island. Men are assigned to the Island for a year at a time, in what seems intolerable conditions. They are completely isolated, save for *Brough's* irregular stops to bring mail and fresh meat. The little island is halfway from New Zealand to station, at the edge of the worst storm belt.

During 27 days on station, we seldom saw the sun, nor any of the 56 flights which passed overhead. Much of our time was spent hanging on. However, we did communicate with every flight, and our 10 weather reports went out on schedule every day. The trouble was, when the planes did fly, they had to keep a tight schedule to get all the supplies in. The ice runway was apt to break up, or become unusable at any time.

When we finally did make port we received this message from Admiral Dufek:

"EXTREMELY IMPORTANT THAT MAXIMUM FLYING BETWEEN NEW ZEALAND AND ANTARCTICA BE ACCOMPLISHED EARLY IN THE SEASON X THE ICE RUNWAY DETERIORATES VERY RAPIDLY . . . DESIRED THAT BROUGH RETURN TO STATION SOONEST . . . MAXIMUM TWO DAYS IN PORT . . . REALIZE THE HARDSHIP THIS IMPOSES ON YOU BUT WILL MAKE IT UP TO YOU LATER . . ." (And he did, more than adequately. But this time, we left after only two days in port.)

ON WAY—USS Brough (DE 148) heads for duty with Deep Freeze IV.

• *25 Oct-19 Nov*—On this second picket, 44 more flights passed overhead. Finally they began to slacken the pace. We sensed that a majority of the flying was finished, and it was. We headed back to Dunedin for a six-week rest, and standby, in case of an emergency.

• *27 Nov*—Thanksgiving was appropriately observed with a scrumptious turkey dinner, while our Kiwi friends continued their work. (It seemed we cornered the limited turkey market anyway; they don't raise too many.) Many Kiwis visited the ship for our big meal, and we sent along a full tray to a couple of our boys in the hospital.

• *1 Dec*—Six highly-motivated sailors were picked up by the Admiral's personal plane, a Navy R5D, and flown to Christchurch, where the Deep Freeze headquarters was maintained. There, the next morning, they were shipped over by genial Admiral Dufek. He took time to pose with each man and talk about home a little.

• *12 Dec — Brough* was challenged by HMNZS *Stawell,* a New Zealand minesweeper. They wanted a sailing and rowing race between the best team each ship could offer.

We borrowed a "convertible" sailing-rowing boat. *Stawell* steamed up the coast, obviously for secret trials. Our entry was dubbed *Columbia,* and *Stawell* called her craft *Septic II.*

The big day arrived. Spectators lined the bridge of *Brough,* where the finish line was marked. A gun report was heard, and the rowing crews began to pull steadily, from far down the channel. At the halfway mark it was even. Our boys were pulling harder than they had ever rowed. But *Stawell's* experience was evident as they won going away. Their cox was dumped with a special vengeance, since he made them row an extra 75 yards. The finish gun didn't go off immediately, and the cox didn't stop till the gun went off.

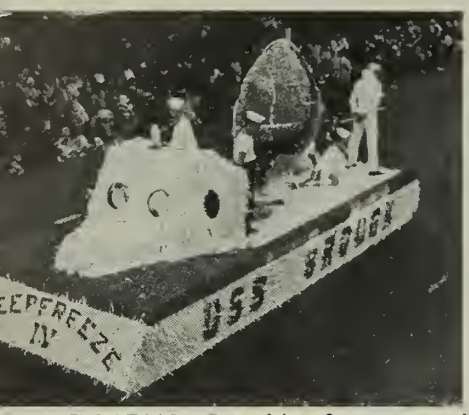
In the afternoon, a large crowd lined the bridge again. Sailboats milled about while we tried to get started. Finally, they all seemed to go in the same direction, with *Brough* in the lead. The lead changed hands, and later, as *Brough* crowded behind *Septic II, Stawell's* entry stopped dead — her mains'l dropped.

Brough won by default. A celebration followed.

Later, as *Stawell* departed, she flashed this message: "HAVE ENJOYED ASSOCIATION WITH YOU X AM LOOKING FORWARD TO OUR NEXT MEETING." We replied: "OUR PLEASURE X WILL PRACTICE."

DEEP FREEZE DUTY STATION—Crew members of *Brough* prepare to send weather balloon aloft to gather information for pilots on Antarctic missions.

BROUGH CAME HOME by Suez Canal. Records indicate she was first DE to make a round-the-world cruise alone.



FLOATING—Friendship-float entered in New Zealand Festival Week by Crew of *Brough* was a hit with people of Dunedin and won second prize.

• *25 Dec*—Christmas in Dunedin. It was hot, and many people were out of town. (They spend their holidays in the interior, camping out, since that is the height of the New Zealand summer.) Again we had a large meal on board, and many Kiwis came aboard to help us with our seven turkeys. Most men spent the day with friends.

• *28 Dec-3 Jan 1959—Brough* left Dunedin for a New Year's visit to Nelson, a small coastal resort well north of our station. The holiday was celebrated with parties and dances. The town's people, many vacationers and sailors all gathered in front of the Post Office at midnight. Our drill team made its first appearance and was an immediate success.

• *5 Jan-13 Jan—Brough* made her third and last picket of Deep Freeze IV. During a lull, she headed even farther south for some oceanographic work. She was turned back at 62° South by 'growlers'—then six-to-10-foot chunks of ice that were so hard to spot. We also saw plenty of the large majestic 'bergs which had been invading the station area for the first time.

• *13-24 Jan*—We remained in port on standby status in case emergency flights had to be made.

• *24-31 Jan*—Festival week in Dunedin. It was like fair week in a farming center, or Mardi Gras. Everyone turned out and took part. And *Brough* was in the midst of it all. Even Admiral Dufek came from Christchurch to be guest of honor.

Parties, processions, pageants, costume balls, radio shows—the whole town was in a whirl. *Brough's* float took second honors in the big Festival Procession. But the real news was made by the Drill Team, led by Forrest M. Hall, GM1, USN, of Key West, Fla. They literally stopped the show everywhere they went. The Festival Procession stopped while the Drill Team went through their fancy-stepping routines and trick rifle handling. They won special recognition from the town fathers and the Dunedin press.

The float won accolades on its own, thanks to hard work by a small, dedicated group of volunteers.

Festival Week offered us a big kick—our last spree before being detached.

• *7 Feb—Brough* departed Dunedin for the United States via the Mediterranean. The word was out—*Brough* might not return next year. After three years of very close relations, this was the parting of old friends. All morning the crowd gathered.

By noon, several hundred were milling on the pier. By 1400, when we took in our lines, there were approximately 400 Kiwis on the pier. Many young ladies, (but more mothers and fathers), and interested friends, had come to wave off the men of *Brough*.

Our whistle said goodbye. At a signal, white hats were thrown in the air. A cheer went up. Four thousand people waved and cheered as we slipped quickly down the channel.

• *15-19 Feb*—Perth, Australia. We found hospitality, open warmth, and a thriving economy in a young town. It was a pleasant four-day stop.

• *28 Feb* — Colombo, Ceylon. Shoppers had a field day as did the camera clickers. Our final message from Admiral Dufek read:

"FAREWELL LITTLE BROUGH CMM YOU HAVE DONE AN OUTSTANDING JOB X ENJOY YOUR CRUISE X BEST REGARDS"

• *7 Mar* — Aden, Arabia. Again, the shoppers and shutterbugs went to work.

• *14-17 Mar* — Athens, Greece. We visited the home of ancient Greece, saw the Acropolis, and met the 'new' Greece.

• *19-22 Mar*—Naples, Italy. We saw the ruins of Pompeii, with Vesuvius nearby. Some managed a fast trip to Rome, while others contented themselves with explorations of eating places and sightseeing in Naples.

• *23-26 Mar* — Cannes, France. We saw the home of the film festival —a modern French resort. Unfortunately, the weather was cold and damp, which made the beach unusable.

• *27-30 Mar* — Barcelona, Spain. Easter in Barcelona, and the first bull fights of the season. Barcelona was one of the most interesting places we stopped.

• *1-3 Apr* — Gibraltar. We spent what money we had left, and then headed for Key West.

• *14 Apr* — Key West. Home again, and we were glad.

• *1 May-1 Sep* — Operating in the Atlantic in the vicinity of Charleston, Key West and the tropical West Indies, and enjoying the balmy weather. Every once in a while, though, we get a little nostalgic for the Antarctic.

FAR AWAY PLACES—Voyage home for crew members of *USS Brough* included interesting liberty ports such as Athens, Greece and Colombo, Ceylon.

VOLUNTEERS head for shore to help fight fire *(left)*. *Above:* French police lead Navymen to burning area.

Hot Time on Riviera

OVER 200 NAVYMEN AND MARINES from USS *Des Moines* (CA 134)—flagship of the Sixth Fleet—had a hot time ashore at one of the world's leading playgrounds when a spectacular forest fire threatened to destroy parts of Nice and Villefranche on the French Riviera.

The *Des Moines* fire fighters—all off-duty volunteers—fought the blaze alongside a smaller number of local firemen before it was finally brought under control after five hours.

There were no casualties, but two square miles of trees and crops were ruined before the fire's advance could be halted. One very anxious moment occurred when a German land mine, dormant since World War II, exploded. Luckily, no one was in the immediate area at the time.

First sign of the fire visible from the harbor was a huge cloud of smoke atop Mount Vinaigrier. When CAPT S. P. Moncure, USN, the heavy cruiser's skipper, saw this, he called the Mayor of Villefranche and asked if men from the ship were needed. "Send all the help you can spare," the Mayor replied.

More than 200 *Des Moines* men responded. Led by LT Leonard Kleeman, the Navymen, armed with fire axes, picks, shovels, saws, machetes and rolls of canvas, loaded into the ship's boats to set out for the scene. Ashore, Navy vehicles and local buses took the party as near to the burning area as possible.

LT Kleeman divided his force into two groups and communicated with them and the ship by walkie-talkie radio. Corpsmen went along to render first aid in case it was needed and—with typical Navy thoroughness—the ship's medical department made arrangements to handle any possible casualties.

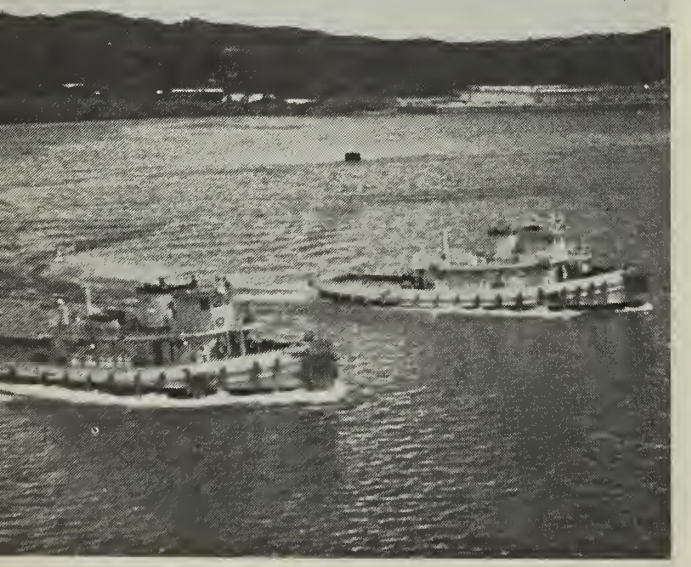
After the fire was brought under control the Navymen, their faces blackened by smoke and dust, helped those who had evacuated their homes to return.

The newspapers of Nice gave the visiting firemen the thanks of the local people, and the volunteers also got a "well done" from CAPT Moncure.

SMOKE-EATERS wage a counterattack *(above)*. *Below:* Seagoing woodsmen try to dislodge smouldering tree.

TUGETHERNESS—Commanding Officer of Tug Base at Apra *(second from left, above)* chats with tug skippers.

LOTS TO DO — *YTB 417 (above)* prepares to tow a floating crane. *Below:* Tug team heads for a new job.



BMC D. C. Smith talks shop with H. L. Walkins, FN.

Lots of Pull—

OUT AT SEA, some 10 miles off Guam, a giant ocean liner sends a short message to the radio center at Apra Harbor: "Arrival time 1300. Request tugs meet and assist at harbor entrance."

At Guam, harbormaster J. C. Fox, QM1, USN, dispatches the reply: "Arrival time confirmed. Request affirmative." Then he picks up a telephone and dials Tug Base, Guam. Base skipper, Warrant Officer J. R. Somers, sees to it that tug captain T. W. Nail, BM1, USN, has his tug at the harbor entrance in time to assist the liner in mooring.

Several hours later, the big ship arrives off the breakwater. The chubby little tug, with a crew of seven, nestles her stubby nose against the liner's side and slips the big visitor into a berth at Apra Harbor's commercial port.

The tugboat story is one of hard work, contrasts and unexpected assignments. It takes only one day aboard a tug to be convinced. The jumble of sundry tasks given these small, powerful boats can make your head swim.

There are no commercial tugs at Apra Harbor, so the Navy berths all ships, commercial and military, arriving at Guam. And the job is a big one.

Since ocean-going ships do not always arrive in the daylight hours, the tugs at Apra Harbor are on a 24-hour alert to assist incoming and outgoing traffic. At any time of the day or night one of these workhorses might be on the way to another assignment.

The tugs at Guam performed an average of 150 jobs per month. That total includes over 50 major ship movements requiring two or more tugs. The "boats" pile up over 500 underway hours each month.

TUG FENDER is fancied up by Navy employee at Apra.

The Tug Story

Because Apra Harbor is not protected from wind it can provide many headaches for harbor pilots and tug skippers. Harbor pilot W. J. Guinnane, who has directed ships in and out of Apra for the past 15 months, claims an ocean-going ship can be towed almost with a piece of string if you have no wind, current or other disturbances.

"But in this harbor," he says, "one sudden gust of wind can slam a liner or freighter full force against the pier. This is why tugboats, with their enormous power, are so important to smooth handling.

After all ships are in port, the tugs keep right on working—as fire boats, as sea and air rescue craft, or performing assorted moving jobs in the harbor. Yard oilers, which come under Tug Base control, deliver an average of 1,900,000 gallons of fuel oil within the limits of the harbor monthly. Additional thousands of gallons are taken to Saipan and Tinian Islands north of Guam.

There's an intense pride in each tug. Almost any tug man will tell you without hesitation that his boat is the best in the harbor and can outdo any other tug.

All the ships operating under the Tug Base are not tugs. Among the 22 craft of the Tug Base "fleet" there are also oilers, ammunition barges, storage barges and water barges.

From the looks of things, Apra Harbor and the Tug Base will be busy for a long time to come. As America's largest deepwater port west of Pearl Harbor, Apra is becoming an important stopover point for the ships of the Seventh Fleet, and its commercial trade is growing.

—Story by J. A. Williams, JO1, USN.
—Photos by T. F. Powers, PHGAN, USN.

BM1 SKIPPER A. S. Stover, of YTB 408, looks on as YTB 417 and his boat get set to tow floating crane.

HARBORMASTER J. C. Fox, QM1 *(above)* plots movement. *Below:* Merchant ship bids adieu to Navy tug.

LETTERS TO THE EDITOR

This section is open to unofficiol communicotions from within the novol service on motters of generol interest. However, it is not intended to conflict in ony woy with Novy Regulotions regarding the forwording of officiol moil through chonnels, nor is it to substitute for the policy of obtoining informotion from locol commonds in oll possible instonces. Do not send postoge or return envelopes. Sign full nome ond oddress. Address letter to Editor, ALL HANDS, Roon. 1809, Bureou of Novol Personnel, Novy Dept., Woshington 25, D. C.

Boilermaker

SIR: I am very interested in taking the service-wide examination for chief boilermaker.

How do I go about applying for it?

What training and eorrespondence eourses should I study?

And, what additional reading material will help me prepare for the test?—R. R., BT1, USN.

• *Application for change to BR and to compete for advancement to BRC must be requested from the Chief of Naval Personnel. The procedures for this can be found in BuPers Inst. 1440.5B. (Bureau authority is required for changes to the BR rating from BT1 or BTC only. BT2 may compete for advancement to either BT1 or BR1. For further info, see the "Manual of Qualifications for Advancement in Rating," NavPers 18068.)*

The required training course for BR1 and BRC is NavPers 10536-B. The related Enlisted Correspondence Courses are "Boilerman, First Class" (NavPers 91513-1) and "Boilerman, Chief" (NavPers 91514-1).

The BuPers pamphlet, "Training Publications for Advancement in Rating" (NavPers 10052-F) lists the bibliography for all ratings and should be consulted by anyone preparing for advancement in any rating. You should also refer to the "Manual of Qualifications for Advancement in Rating" (NavPers 18068).

Copies of all these publications should be available in your personnel office.

Happy studying.—ED.

Pro Pay and Advancement

SIR: Last year I took the service-wide examination for SD2, and later took the test for pro pay. I sueceeded in both ventures. In January, this year, the Bureau ruled that all PO2s must have two years in rate to be eligible for PO1.

Now, my questions are: Am I eligible to take the exam for pro pay (P-2) this year, or do I have to wait two years the same as for advaneement; and if I am eligible, must I be re-reeommended by my Division Offieer?—R. J. B., SD2, USN.

• *You do not need two years as PO2 to be eligible for pro pay. The two-year rule applies only for advancement. There is no time-in-rate requirement for pro pay.*

No proficiency pay (P-2), however, has been authorized for fiscal year 1960. To requalify for P-1, you must take the November 1959 examination.

The first and most important eligibility requirement for this test, however, is your CO's recommendation. You must have official okay each time you compete for either pro pay or advancement.—ED.

Dislocation Allowance

SIR: I was previously stationed in Hawaii, permanently attaehed to Air Barrier Squadron Two. Upon expiration of my enlistment I was transferred to the U. S. for separation. I was discharged at the Reeeiving Station, Treasure Island, Calif., and reenlisted the next day.

I was ordered to Utility Squadron Five based at the Naval Air Faeility, Naha, Okinawa. My family joined me there five months later.

Do I rate payment of a disloeation allowanee?—O.R.W., AE2, USN.

• *Sorry, but according to the Comptroller General, you're out of luck.*

He has ruled that a dislocation allowance is not payable when reenlistment is effected at a place other than the old permanent station, unless the orders transferring a man for discharge indicate reenlistment and further assignment to duty elsewhere.

In your case, the orders transferring you from Hawaii to the U. S. for discharge didn't indicate reenlistment and further assignment. Your transfer to Okinawa after you reenlisted was considered to be a change from home to first station under the provisions of "Joint Travel Regulations."—ED.

A Uniform View

SIR: I believe that D.A.A., EMC (SS), has some good ideas about CPO uniform ehanges. I go along with his idea of abolishing the white uniform. It would be interesting to hear the offieers' views on their white uniform. The khakis are mueh eooler and retain their neat appearanee a lot longer.

I ean't agree with him, however, on his remarks about a single-breasted blue blouse. I think the present blue blouse should be changed to single-breasted.

Quite often, even in the Southern California area, blues are worn while on liberty. The weather is just warm enough to make you want to unbutton the hot, double-breasted blouse.

I've found that the single-breasted khaki uniform is mueh more comfortable both in an offiee and in an automobile. I suggest that COs ask the opinions of officers and CPOs at their bases to get a realistic view on the subjeet.

I'm mighty proud of my uniforms the way they are, but I would be willing to change to a new single-breasted blouse—if a new one was authorized. —D.R.R., ACCA, USN.

• *It appears that you're in the minority on both your points, according to opinion polls and letters.*

First of all, the white uniform serves a dual purpose. There is not only the Service Dress White uniform, but also the Tropical White Long uniform that uses most of the same items. This tropical uniform is being worn quite extensively and is becoming more and more popular.

Even enlisted men below CPO now have a tropical white uniform. A short-sleeve shirt is being worn by EMs where tropical longs are prescribed.

As for the double-breasted blues, there are still many men who prefer

Shellback Without a Card

SIR: I would like to get another Shellbaek eard. I erossed the Equator during World War II aboard USS *Munda* (CVE 104) about Oetober 1944.

I was issued one at the time, but have lost it some plaee. I think my squadron is planning a trip for next year and I sure wouldn't like to go through that initiation again.—B.E.F., CS1, USN.

• *The only person that can issue a Shellback certificate is your commanding officer at the time you crossed the Equator. The certificates are strictly unofficial and cannot be issued or reissued by the Bureau, even though your record may show that you have crosed the Equator.*

We don't know what King Neptune will dream up to punish you for losing your certificate, but you'll find out. Good Luck.—ED.

(As old shellbacks, however, we'll give you this advice: If you have any papers or pictures to prove your point, ask your present CO to authenticate a new certificate.—ED.*)*

the older and traditional double-breasted blue blouse. So many men evidently prefer it that there are no plans for converting it to single-breasted.—ED.

When I Retire . . .

SIR: A couple of things have been bothering me and several other chiefs in this Squadron.

I will soon be transferred to the Fleet Reserve after 19 years, six months, and 10 days of service. If I am recalled after a couple of years for more active duty, but can't pass the physical, what happens to me? Do I still get my retirement pay or do they release me with severance pay?

The other question: Is a transfer to the Fleet Reserve considered a discharge? I would like to go to school under the GI Bill but I am told that I have to do it within three years from my last discharge, which was 1 Dec 1955. What is my status in relation to school?—J.D.D., ADC, USN.

• *We wish you much success and good fortune in retirement. And don't worry about losing your retainer money because of your physical condition after you leave. If you are found physically unfit after you have gone out on 19 years and six months (whether you're recalled or not), you would be transferred to the retired list. Unless otherwise entitled to higher pay, you would draw the same amount as your retainer check.*

Your GI Bill is another thing. Your transfer to the Fleet Reserve is not considered a discharge, but that may not be your problem.

You must begin your training within three years of the date of your last "unconditional" discharge. (This means a discharge that completely frees you from further service, such as at the end of your enlistment.) If, when you shipped over in December 1955, it was before the end of your enlistment just so you could reenlist, then that would be a "conditional" type discharge and you would still be eligible under the GI Bill.

If, on the other hand, you were discharged at the end of your enlistment, with no strings attached, that would be considered an "unconditional" discharge, and your three-year deadline has already passed.—ED.

Will There Be a Uniform Change?

SIR: I agree with the comments about enlisted men's uniforms made by H. E. K., YN3 and G. H. H., YN2, in the April issue. To me, the whole enlisted uniform needs redesigning. I feel the enlisted man has been handicapped by wearing a uniform which has been outdated by progress and evolution.

Must our "modern, atomic, electronic, supersonic" Navy forge ahead in 18th Century uniforms? Officers and chiefs insist our uniform looks sharp yet, visualize if you can, the loud screams of protest if they had to wear it. I am proud of what my uniform stands for, but I'm not proud of its design.

How can a man—a grey-haired man, perhaps, with four or five hashmarks—proudly walk down the street looking like a kid or Donald Duck? What's his answer when some wit orders a dozen ice cream bars from him?

The other armed services have a uniform which fits well and is reasonably contemporary. If the traditional uniform is so important to the Navy, why not put the officers back in ruffles and frills, with boots and three cornered hats? I'm sure they're traditional too.

I am on my second enlistment and the one small factor that makes another service look good to me is that they are moving forward, not looking back.

TWO CREW MEMBERS of USS *Des Moines* (CA 134) take to the air, painting ship's after main battery director.

I guess the whole problem is, that if we were given a decent looking uniform, we might be mistaken for a chief or an officer.—M.L.H., YN2, USN.

SIR: It seems that each year about this time articles appear in ALL HANDS about changing the enlisted uniform. Yet, little or nothing seems to be done about it.

I am proud of the U.S. Navy, but I would like to see the men below E-7 have a *uniform*, not a traditional front.

I think a summer uniform of light blue conventional type trousers, short sleeve shirt, and garrison cap would be appropriate. The winter uniform could be dark blue and similar to the CPO service dress.—R.L.S., Jr., PN3, USN.

• *Much to the dislike of some enlisted men, ideas come and go a lot faster than uniforms. The uniforms worn today are traditional, but some changes are being made.*

Perhaps the most significant one—and this may be considered the first step toward giving enlisted men a new-style uniform—is the adoption of the white tropical shirt. (It was authorized by BuPers Notice 1020 of 27 Apr 59.) This short-sleeved shirt is apparently very popular.

Changes cannot be made overnight. First, recommendations are submitted (many as the result of letters like yours); next, these recommendations are considered, discussed, and some accepted. Those accepted are then worn in the Fleet where they are evaluated. After the reactions of Fleet personnel are received, a final decision is made.

Tradition comes slowly, but it sometimes seems a lot slower when it departs. Be patient.—ED.

COMING TO ROOST—An HTL-5 whirlybird returns to the icebreaker USS *Edisto* (AGB 2) after making an aerial search for a lead through ice field.

Scorpion Started It

In our January issue we published a letter from R. R. Myers, EMC, USN (Ret), about USS Scorpion, our "one-ship fleet" in the Mediterranean before World War I. At the end of the item, we said:

"Anybody know anything more about her? If so we'd like to hear it."

Since then, we have definitely "heard it"—as the following letters indicate.

SIR: Since I was in the Navy a good while ago, I think I can help you out on *Scorpion.*

When I reenlisted at Philadelphia in 1908 I was transferred to the receiving ship at the Boston Navy Yard to commission *Scorpion* after she had been overhauled. There were many ships commissioned that year—among them the cruisers *Chester, Birmingham* and *Salem* at the Boston Navy Yard and the battleship *New Hampshire* at the Brooklyn Navy Yard.

Scorpion's first assignment was to convoy four submarines from Boston to New York. (To do it, we sometimes had to take the subs in tow.) That done, we headed for the Caribbean.

We had been in the West Indies about a month when the captain received coded orders to return to Philadelphia and prepare *Scorpion* for duty as station ship at Constantinople. The crewmen were so surprised they couldn't believe the news.

Our officers were relieved, and five new ones took over—LCDR George Wood Logan, LT Allen Buchanan, ENS John W. Wilcox, ENS Isaac Dortch and ENS Shofford.

At Philadelphia, part of *Scorpion's* armament was taken off, leaving only two six-pounders for firing salutes.

We then headed across the Atlantic, stopping in Bermuda to coal ship. Because the bunkers wouldn't hold enough coal to take us to the Azores, we took on extra coal in large bags, which were stored on deck. Next, we headed for the Dardanelles, via Gibraltar and Naples. Before entering the Dardanelles we were delayed 48 hours awaiting clearance for the ship.

England, Germany, France and Russia had station ships at Constantinople long before we did and, incidentally, very few Navymen know that USS *Despatch* was stationed at Constantinople from 1877 to 1879.

Our first visit to Constantinople was a brief one, since we were soon on our way to Messina, Sicily, to help out after the earthquake there. About the time of the 'quake, the Great White Fleet reached the Eastern Mediterranean, and ADM Charles S. Sperry arrived at Messina in his flagship, USS *Connecticut.*

One of *Scorpion's* main jobs at Messina was to direct the waterfront traffic carrying lumber to build homes.

After that, we went back to Constantinople.

When we first arrived, there were homeless dogs all over the city. Allegedly, they were considered sacred, because their barking had given the alarm at one time when the city was being invaded. While we were there, however, the dogs were removed to an island in the Sea of Marmara.

Some of the shipmates I remember from my *Scorpion* days are: Chief Carpenter's Mate W. H. Stratton; a yeoman second class named Kann; S. J. Murphy, YN3; Chief Gunner's Mate T. J. Bristol; and Charles Schlegel, FN1.

In 1910 *Scorpion* was ordered to Greece, so that her crew—90 men—could be relieved and transferred to the cruiser USS *New York,* bound for the Asiatic Station to relieve USS *Charleston.* That was when I left her.—Chief Boatswain C. Conner, USN (Ret), Philadelphia, Pa.

SIR: When I read that item in your January issue, I thought right away that if anyone knew about *Scorpion,* who else would it be but old Captain Mossbottom. So, I capered down to the Cape and showed him your piece about the old yacht.

"Do I know anything about *Scorpion?* Sonny! Why buckle my bilges 'n call me Bully Boy! I was there.

"Those boys in *Scorpion* had been interned so long, and away from contact with the Navy for so many years, that when the old cruiser *Saint Louie* finally got through to Constantinople months after the end of World War I, they found *Scorpion's* quartermaster up on deck standing his watch wearing a derby hat!

"But, the best story I heard tell of *Scorpion,* was the one about the young officer in her who couldn't wait for the Armistice to come along. He wasn't interned in the ship, and before the war ended he'd started to head for home. Only trouble was that things were so twisted up all through the Balkans that it took him months 'n months just to get through to Paris to contact the Navy there. In the meantime, BuNav had lost all track of him, and they'd dropped him from the Navy list.

"So, lo 'n behold, one bright day well into 1919 he showed up in BuNav and reported in. First thing he did, of course, was to get himself put back on the Navy list—and then he was bold enough to ask the Detail Officer for a couple of months' leave. That was one item that wasn't to be had so easily in those days, and the BuNav boy hit the overhead.

" 'Leave? That's out of the question. Why, we've got a billet waiting for you, and no other officer can fill it.'

" 'Why, I was in *Scorpion* over a year before she was interned for a couple more, and I've been all this time getting back. I didn't even exist in your book, from the way you dropped me off the list, but now that I'm here I'm the indispensable man, eh?'

"Well, that had 'em. He got his leave—and you can pass the word

He Hit the Nail on the Head

SIR: The 185-foot escort USS *Crestview* (PCE 895) recently had a ceremony aboard which impressed the members of the crew enough to think it would be of interest to your readers. The occasion was the presentation of Good Conduct Awards to eight members of the crew. This is what our CO, LTJG C. E. Houston, USN, had to say:

"You men are assembled here today to receive awards substantiating your faithful service to the United States Navy.

"In order to earn these awards you have fulfilled all the requirements for outstanding conduct, which sometimes is not an easy task. You have exhibited for each three-year period that the individual award covers, an outstanding degree of fidelity, obedience and zeal—to your country, to the naval service and to the individual commands in which you have served.

"I sometimes think it is easier to earn an award for valor than it is to earn the Good Conduct Medal, since the awards for valor are presented for an individual act of heroism done in a few minutes; whereas these awards require consistently outstanding conduct over a long period of time. It gives me great pleasure to present these awards to you. They represent a total of over 84 years of Good Conduct."

We never thought about a Good Conduct Award in this way before. We feel he really hit the nail on the head. What do you think?—ENS W. R. Joncas, USNR.

• *We agree with you and your skipper wholeheartedly. Sometimes the presentation of Good Conduct Awards and other significant incidents which are related to good leadership qualities are taken for granted.* Crestview's *skipper hit the nail on the head.*

And the eight crew members who were honored are: Roger E. Young, BMCS, USN, 4th and 5th awards; William A. Adams, Jr., CS1, USN, 4th and 5th awards; Roger P. Lloyd, HM1, USN, 5th award; Rufus W. Vaughan, GM1, USN, 3rd award; Martin C. Craft, BM2, USN, 5th award; Bobby Dawson, EN2, USN, 3rd award; Don C. Grube, CS3, USN, and Jose B. Sales, TN, USN, both of whom received a first award.—ED.

along to the young lads that anytime BuPers tries to give 'em that indispensable man stuff, they can use the story about the indispensable youngster from *Scorpion*, and that'll make 'em walk back the cat."

And so I'm passing the story on to you so that BuPers can file it away for future use whenever it's needed.—CAPT Isaiah Olch, USN (Ret), Nice, A. M., France.

SIR: Your January item on *Scorpion* recalled the visit USS *North Dakota* made to Constantinople in December 1919.

North Dakota's arrival was a cause for rejoicing among *Scorpion's* crew. At that time there was a considerable amount of good natured discussion between British and American Navymen over "Who won the war?" (meaning World War I). In consequence, the men of *Scorpion* had quite often felt the need for reinforcements to help prove their point.

North Dakota proved a valuable ally in the debates, and it was probably with a feeling of regret that the men of *Scorpion* saw her weigh anchor.

That Med cruise of the "ND" may be remembered by some of your older readers and would undoubtedly make an interesting article for *All Hands*. One purpose of the trip was to return to Italy the body of the Italian Ambassador, who had died in Washington. The other missions which followed that one would furnish you many a salty ancedote.

Incidentally, am I correct in thinking the *Tennessee* mentioned in your January article was later sold to Greece? It seems to me she was moored dockside when we visited Piraeus in 1920, and that one of our crew members who had served aboard her went over to visit.—R. T. Strunz, HMC, USNR (Ret).

• *Great—all these letters and only one question to answer—the query from Chief Strunz about* Tennessee.

Evidently, Chief, you are thinking of some other ship. The Tennessee *we mentioned was Armored Cruiser No. 10. On 29 Aug 1916, while lying off San Domingo (now Ciudad Trujillo, Dominican Republic), she was driven ashore in a storm and completely wrecked. She was stricken from the Navy lists in 1917, and so far as we can tell, was not sold to Greece.*

As for the further story of ND's *Med cruise, you sound like just the man to write it up.*—ED.

Korean PUC for Bexar

SIR: I would like to know if USS *Bexar* (APA-237) was awarded either the Presidential Unit Citation or the Navy Unit Commendation for her Korean service. While I was stationed on board we operated in the Korean area from September 1950 to January 1951. We did get the Republic of Korea Presidential Unit Citation.—H.W.D., EM1, USN.

• *Sorry, but the records show that* Bexar *was not awarded either the PUC or the NUC for her part in the Korean conflict. She did see plenty of service in that area, however.*

Bexar *was operating in the Mediterranean in the summer of 1950, on what was expected to be a calm, peaceful cruise, but the outbreak of fighting in Korea changed all that.*

In early July she received hurry-up orders to proceed to Crete and take on a load of Marines. She then proceeded full steam ahead through the Suez Canal, the Red Sea and the Indian Ocean to Japan. She later shuttled troops from Japan to Korea and participated in the Inchon landings before returning to the U. S. in January 1951 for overhaul and refresher training.

August 1951 found Bexar *back on the job again, shuttling troops between Japan and Korea. In May 1952 she returned to the West Coast, but in July 1953 was back in Korea again as flagship for Operation Big Switch, which involved moving prisoners of war from Koje Do to Inchon.*—ED.

SEAGOING—A mighty splash partially hides *USS Pawcatuck* (AO 108) as she pulls away from a "customer" after delivering fuel in the Mediterranean.

"SI" STORY—Rodolf I. Godines, CN, talks to men of Spanish training ship *Juan Sebastian Elcano* in New York.

The Calvert Story

SIR: While reading a back issue of ALL HANDS (December 1958) I came across a letter in which someone asked what decorations USS *Harry Lee* (APA 10) had earned. You gave a very good history of that ship's accomplishments.

At one point you mentioned that *Harry Lee* had engine trouble while preparing for the landings in North Africa, and you said, "*Harry Lee* lost part of her crew. . . . Well trained officers and men . . . were transferred to another ship."

That "other ship" was USS *Calvert* (APA 32), now a veteran of 16 years' service, and I'd like to remind you that we have quite a history, too.

It began on 30 Sep 1942, when the Navy acquired ss *Delorleans*, then abuilding at Sparrow's Point, Md. She was commissioned the following day (1 Oct) as USS *Calvert* (AP 65). She was named for George Calvert, First Lord of Baltimore.

Harry Lee had her engine breakdown on the morning of October, and on the 24th, *Harry Lee's* skipper, accompanied by 23 of his officers, his entire boat group and troops and cargo, were transferred to *Calvert*, which was then going through her shakedown. On 25 October, with her experienced crew, the new ship sailed for Safi, French Morocco, where she took part in *Operation Torch*. She spent six days in the assault area before returning to Norfolk, Va., to start training the Army units she was slated to carry for the Sicilian campaign.

On 10 Jul 1943 *Calvert* (by then designated APA 32) landed her troops of the 45th Division on her assigned beaches. During the Sicilian operation she required the equivalent of 381 LCVPs, 28 LCMs and 31½ LCTs to unload her troops and cargo.

Distress Signal—Ensign Flown Upside Down

SIR: Aboard this ship there has been much discussion about the legitimacy of a distress signal.

Since Navy publications differ on this matter, we are asking you to set us straight.

Page 66 of the *Boatswain's Mate Training Course for First and Chief* (NavPers 10122-A) says: "Nobody knows who dreamed up the idea that the national ensign, hoisted upside down, is a signal of distress. Our men-of-war go to the bottom in action with their colors rightside up and still flying. The ensign upside down is not a recognized signal of distress, but of course, if you see it hoisted that way, you should go to the rescue."

On the other hand, page 60 of *Shipboard Communications* (NavPers 10806-A) under the title "distress signals, by day," paragraph 4 states: "National ensign flown upside down (United States vessels only)."

I also believe that the Emergency Shipbuilding Course offered at FTC San Diego teaches that the ensign flown upside is an authorized distress signal. But I can't verify this.

What do you say?—LTJG J.S.L., USNR.

• *We won't commit ourselves, but here is what some others have to say:*

Page 183 of Farwell's "The Rules of the Nautical Road" shows a picture of an inverted U.S. ensign used as a distress signal on the high seas or inland waters. Although International Rules and Inland Rules do not provide for this signal, Farwell states on page 190 of his book "that the inverted ensign is an additional widely recognized distress signal in all navigable waters." It can be readily seen that it would be impossible to expect an adoption of such a signal into international law mainly because some foreign ensigns would never appear to be inverted. Take the ensigns of Belgium, Cuba, Iceland, France and Denmark, for examples.

Then, in DNC 27, Annex A, Flag Code, page A-3, Section 4a, there is the statement, "The flag should never be displayed with the union down, save as a signal of dire distress." Soooooo, you see. For more on flags, see the August issue.—ED.

The latter part of August 1943 found *Calvert* in New York, where she loaded troops she was to carry to the Pacific. Her next amphibious action was on 20 November at Makin Island, where she landed 1400 members of the 165th Regimental Combat Team of the 27th Infantry Division. In one period of about 90 minutes during this operation *Calvert* put 913 men, plus cargo, across the beach.

After that it was back to the West Coast for more troops and training. Then, on 31 Jan 1944 *Calvert* landed the Main Attack Detachment on the beaches of Roi and Namur, Kwajalein Atoll, Marshall Islands.

A brief yard availability at Pearl Harbor followed.

When *Calvert* came out of the yard she was assigned to a task group being formed for the Saipan and Tinian campaigns. In the Saipan invasion she helped draw enemy attention away from the main landings by taking part in a diversionary movement at Tanapag Harbor. Later in the operation she cared for nearly 200 casualties from the beach. About 50 of them were able to go back ashore for duty. At Tinian, *Calvert* was again part of a diversion.

This time, her boat group came under heavy fire from shore batteries, but the batteries were silenced before they did any harm to her boats or crews.

On 10 Aug 1944 *Calvert* returned to Pearl Harbor. On 15 September she sortied—again loaded with troops and cargo—for the then proposed landings at Yap and Ulithi. However, there was a change in plans, and the group *Calvert* was in was re-routed to Leyte, Philippine Islands, for the landings there. Arriving off Duig, east central Leyte, she worked through daylight, darkness and air attacks to unload her troops and cargo.

From Leyte, *Calvert* headed for Manus for a few days' rest, then steamed for the New Guinea-New Britain area to load more troops and cargo for her next operation—the Lingayen Gulf landings of 9 Jan 1945. Soon afterward she was on her way to Biak, Indonesia, to pick up more troops and cargo. She was back off Leyte by 7 February, and on the 9th, she participated in the landings on Mindoro, Philippine Islands.

VISITING VIETNAMESE orphans are passed down a steep ladder by the men of the *USS Salisbury Sound*.

By this time *Calvert* had really earned a rest, so she sailed back to Bremerton, Wash., for overhaul. After that was completed she headed for the Philippines once more—this time as flagship of COMPHIBGRU 14. She reached Zamboanga in September, and "donned two hats" as flagship of COMPHIBGRU 11 and of the Commander of the Central Occupation Group of the Fifth Fleet's zone of responsibility. She then headed for Japan, where she landed occupation troops on 6 October.

A month later, *Calvert* was assigned to Magic Carpet duty, carrying wartime personnel back to the United States for discharge and taking replacements overseas. She left Subic Bay, Philippine Islands, on her last trip on 31 May 1946, and eventually wound up in Norfolk, Va., where she was decommissioned and placed in the Norfolk Group of what is now the Atlantic Reserve Fleet.

The Korean fighting brought *Calvert* off the sidelines. She was recommissioned on 18 Oct 1950, and has seen all sorts of service with the Pacific Fleet since then. Here are a few of the high spots.

April to August 1951—Part of Task Force 90 in the Far East. After that she spent about a year on West Coast duty.

October 1952—Returned to the western Pacific as flagship of COMTRANSDIV 13.

December 1952—Participated in operations with the 7th Marine Regiment in Korea. Later, helped in redeployment of units of the 1st Cavalry and 45th Divisions, then returned to the United States for training with the Third Marine Division, which was then being formed.

August 1953—Helped carry the Third Marine Division to Japan, after which, she picked up 900 Army men at Pusan, Korea. She reached San Francisco, Calif., on 16 Sep 1953, having sailed 11,000 miles in 41 days.

March 1954—Took part in *Operation Flaghoist* at Iwo Jima, for which the largest single amphibious assault force since World War II was assembled. A few months later she carried some 6000 refugees from Haiphong, in northern Viet-Nam, to Saigon, in the southern part, during the "Passage to Freedom" operation which occurred when the communists took over northern Viet-Nam.

November 1954—*Calvert* returned to San Diego, Calif., to become flagship of Amphibious Squadron Five.

March 1955—*Calvert* started her fifth

tour of Far East duty since her recommissioning in 1950. After three amphibious operations, she headed back to California for more coastal operations and an overhaul at Long Beach.

August 1956-April 1957—Far East tour of duty, number six.

June 1958—*Calvert* left for the Far East again. During the crises in Lebanon and Taiwan she, along with other units of Task Force 76, went into an alert status and worked closely with the Third Marine Division.

September 1958—Participated in *Operation Land Ho* in the Taiwan area.

During her years of travel and service *Calvert* has garnered the Navy Unit Commendation, American Area Campaign Medal, European-African-Middle Eastern Area Campaign Medal with two stars, Asiatic-Pacific Area Campaign Medal with one silver and one bronze star, World War II Victory Medal, Navy Occupation Service Medal, China Service Medal, National Defense Service Medal, Korean Service Medal with two stars, United Nations Service Medal, Philippine Liberation Ribbon with one star, Republic of the Philippines Presidential Unit Citation and the Viet-Nam Presidential Unit Citation.

Although old by some standards, *Calvert* isn't just sitting around recalling her past. Any time she's needed she can prove what's meant by the expression that "an APA's boats are her main battery."—T. W. Glickman, LTJG, USN.

• *After this account, about all we can add is that Calvert has a good press agent.—By the way, how did they get that one-half of an LCT (. . . 381 LCVPs, 28 LCMs and 31½ LCTs . . .) in to shore without swamping it?*—ED.

Ship Reunions

News of reunions of ships and organizations will be carried in this column from time to time. In planning a reunion, best results will be obtained by notifying the Editor, ALL HANDS Magazine, Room 1809, Bureau of Naval Personnel, Navy Department, Washington 25, D. C., four months in advance.

• *Great White Fleet*—The annual reunion for all who made the world cruise in 1907-09 will be held in the U. S. Grant Hotel, San Diego, Calif., on 16 December. For information, write to Harry S. Morris, TMC, USN, (Ret.), 3117 Polk Ave., San Diego 4, Calif.

• USS *Hornet* (CV 8 and CV 12)—All who served on board these ships are invited to attend the 12th annual reunion to be in New York City on 24, 25 and 26 June 1960. Write to John F. Murphy, 1657 Hennington Ave., Wantagh, L. 1., N. Y.

• USS *Stafford* (DE 411)—A reunion will be held on 17 October at the Hotel New Yorker, New York City. For details, write to Elias Lipschutz, 119 Saranac St., Rochester 21, N. Y.

• *VF 837*—A reunion is scheduled for 7 November at the Union Club, Hoboken, N. J. For details, write to J. W. Johnston, 7259 Shore Rd., Brooklyn 9, N. Y.

• USS *Ammen* (DD 527)—All who served on board during World War II, and who wish to hold a reunion with time and place to be decided, may write to Herbert Legg, Box 212, Olympia, Wash.

• USS *Douglas L. Howard* (DE 138)—All who served on board during World War II and who are interested in holding a reunion in New York in 1960, may write to Thaddeus W. Tecza, 149 Ninth St., Passaic, N. J.

• *Composite Squadron 10* (VC 10)—Members who served during either tour and who are interested in holding a reunion may write to Ernest H. Courtney, Jr., 4815—43rd Pl., N. W. Washington 16, D. C.

Requirements for LDO

SIR: I have a question regarding the LDO program for fiscal year 1961.

I enlisted in the Navy on 3 Jan 1951 and my birthday was 12 Apr 1926. Since I would have only nine years naval service (10 years was required for LDO), as computed for participation in the June examination, I applied for the WO program only. I hoped for waiver of the 72 days I was over age.

I understand the instructions have been changed since the Warrant Officer program was discontinued. What are the qualifications for LDO(T) now? —C. S., AGCA USN.

• *To be eligible for LDO(T) now, according to BuPers Inst. 1120.18F, you must meet the following basic requirements computed to 1 July of the calendar year in which you make application:*

You must have completed eight years of active naval service, exclusive of active duty for training in the Naval, Marine Corps, or Coast Guard Reserve; and you must not have reached your 34th birthday. It looks as though you missed the age requirement by about two and one-half months, and no waivers are allowed.

Other qualifications are much the same. Complete information has been distributed to the Fleet in BuPers Inst. 1120.18F.—ED.

★ ★ ★ ★ TODAY'S NAVY ★ ★ ★ ★

CLASS IN SESSION—A group of students from the Armed Forces Staff College observes antisubmarine exercises from the island of *USS Randolph* (CVA 15).

Fish with Ears

Antisubmarine warfare may soon be revolutionized as the result of a new underwater detection system known as Variable Depth Sonar (VDS).

Using this new system, surface ships will be able to discover their undersea enemies in time to reach out with long-range weapons and destroy them before they can make a torpedo attack.

Somewhat resembling a fish, the VDS listening device is attached to a cable and towed through the water. Weights are used to keep the sound gear at the desired thermal depth.

This new detection gear is able to reach below the ocean's thermal layers in which submarines stalk their prey undetected by current listening devices.

The Variable Depth Sonar is not operational at the present time.

Evaluation tests have been completed successfully and procurement of VDSs for the Fleet is underway.

Popular Missile

Two contracts, totaling over 19 million dollars, have been awarded to civilian firms to meet Navy and Air Force requirements for *Sidewinder* guided missiles.

Sidewinder is the only United States air-to-air guided missile in production for use by foreign countries. (During the Quemoy crisis in 1958 it was successfully used by the Chinese Nationalists, under combat conditions.)

The U.S. Air Force, as well as the Navy, has equipped some of its newest jet fighters with *Sidewinders.*

The simple, heat-homing missile was developed at the Naval Ordnance Test Station, China Lake.

YESTERDAY'S NAVY

On 6 Oct 1884 the U. S. Naval War College was established at Newport, R. I. On 13 Oct 1775 the first official step was taken toward the establishment of U. S. Navy. Silas Deane, Christopher Gadsden and John Langdon were appointed a committee by Congress to fit out two warships to cruise against the British. On 27 Oct 1864 LT Cushing rammed and destroyed Confederate ship Albemarle. From 24-26 Oct 1944 one of the biggest naval actions ever fought occurred in the battle for Leyte Gulf where U. S. Navy destroyed Japanese naval power.

TV at Work in Subs

A joint Navy-civilian industrial survey team is making a study of the operaion of atomic submarines that may lead to the development of a simplified control system that would reduce present 100-man crews to 12 men.

Working under an Office of Naval Research contract, the team has a 1964 target date for placing SUBIC (submarine integrated control system) into a nuclear submarine. If successful, this project would be of extreme importance to both the small "killer" (ASW) submarines such as uss *Tullibee,* SS(N)-597, and the larger Fleet ballistic missile-firing subs such as uss *George Washington,* SSB(N)-598, that are now being built.

Through SUBIC, scientists are attempting to create a balanced man-machine partnership that will increase the operational and combat effectiveness of submarines. The new system will use electronic sensing and data-processing equipment to permit up-to-the-minute tracking of contacts and provide information necessary for precise navigation and weapons-firing.

A television-type visual display of information will enable the submarine skipper to make prompt decisions. In effect, he'll have an "electronic porthole" to "see" his sub-surface environment, similiar to a pilot looking through the windshield of a plane. These features, originally developed for the aircraft instrumentation program, are logically adaptable to the latest atomic subs which feature one-man airplane-type control. The single-stick submarine system was installed in the high-speed attack sub uss *Skipjack,* SS-(N) 585, which was commissioned on 15 Apr 1959.

Atomic-Powered Surface Ship

The nation's first nuclear-powered surface ship, the guided missile cruiser uss *Long Beach,* CG(N) 9, has been launched at Quincy, Mass.

The 14,000-ton ship will have two pressurized water reactors similar to the ones installed in the Navy's nuclear-powered submarines. She is

scheduled to be completed in late 1960 and to join the Fleet in late 1961 or early 1962. The $250,000,000-ship will be armed with both *Terrier* and *Talos* missiles.

CAPT Eugene Y. Wilkinson, USN —he was first CO of USS *Nautilus*, SS(N) 571—has been designated as the first commanding officer.

Long Beach, which is 721 feet long and 73 feet wide, will cruise at over 30 knots. Her range will be almost unlimited.

Getting a Taste of Tomorrow

The National Aeronautics and Space Administration (NASA) has selected the Navy's *Crusader III*, Mach 2-plus fighter, for research related to passenger-carrying aircraft of tomorrow.

Studies on noise problems in supersonic aircraft, automatic pilot projects, and high-speed tracking by radar will be included in the program, aimed at obtaining data for development of the supersonic, high-altitude jet transport of the future. Some research work for the Navy and Air Force will be carried out simultaneously.

Equipped with the newest, most versatile electronic equipment ever installed in a Navy fighter, *Crusader* is designed to relieve the pilot of many of his routine flying tasks and enable him to concentrate on his mission.

Push button features anticipate the day when automatic systems will control commercial airliners, prevent collisions and perform most flight functions.

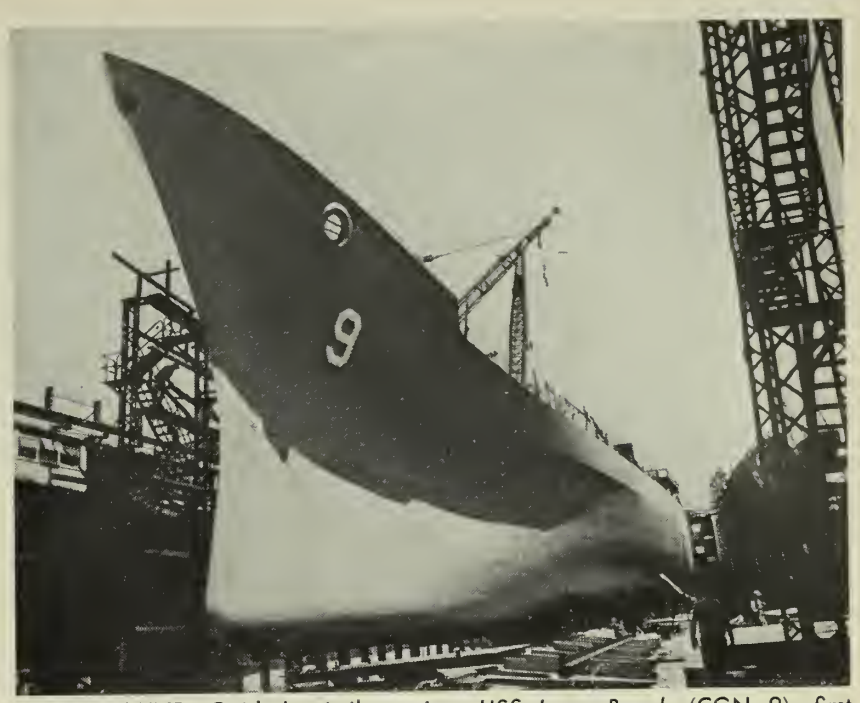
Crusader is capable of operating at space-edge altitudes above 95 per cent of the earth's atmosphere and of reaching speeds well above twice that of sound. Its range is greater than that of any fighter capable of such high performance.

NASA will get five of the aircraft. Two will be assigned to the Langley Research Center in Virginia, and another to Ames Research Center at Moffett Field, Calif. Two will be used as spares.

DesLant 'E' Awards

Twenty-four ships of the Destroyer Force have been awarded the efficiency "E" in annual Fleet Battle Competition conducted between more than 200 ships in the Atlantic Fleet Destroyer Force.

The awards went to the ships for excellence in battle readiness. This covered the areas of gunnery, operations, engineering, antisubmarine warfare and repair.



WATER-BOUND—Guided missile cruiser USS *Long Beach* (CGN 9), first U. S. nuclear-powered surface ship, rests in the ways before being launched.

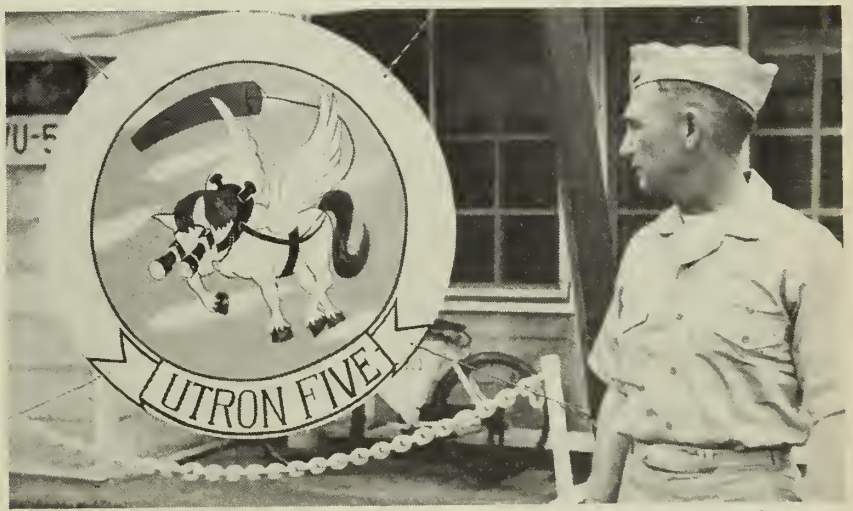
In competition with other destroyer-type ships, each was graded at the end of the fiscal year on the basis of points earned during at-sea exercises and for over-all combat readiness.

USS *Mills* (DER 383), a Newport, R. I.-based radar picket escort, commanded by LCDR L. D. Loudermilk, USN, was judged *outstanding* in every area of competition.

Other Newport ships awarded the "E" are USS *Fiske* (DDR 842), *Hunt* (DD 674), *Beatty* (DD 756), *Wadleigh* (DD 689), *Norris* (DDE 859), *Cassin Young* (DD 793), *Courtney* (DE 1021), *Hartley* (DE 1029), *Vandivier* (DER 540), and *Hugh Purvis* (DD 709).

Norfolk, Va., destroyers named for the award are USS *Soley* (DD 707), *Leary* (DDR 879), *Robert K. Huntington* (DD 781), *Ault* (DD 698), *Lowry* (DD 770), *Eaton* (DDE 510), *J. C. Owens* (DD 536), *Basilone* (DDE 824), and *Wilkes* (DD 441).

USS *Jonas Ingram* (DD 938) and *Laws* (DD 558) of Mayport, Fla., USS *Huse* (DE 145) of Key West, Fla., and USS *Furse* (DDR 882) of Charleston, S. C., also won the "E."



HIS BRAINCHILD—Aviation Pilot John R. Thompson, ACC, USN, studies new insigne he designed for his squadron. Larry N. Frair, PH3, made the drawing.

Task Force Six at High North

With summer once again arrived in the Arctic, Military Sea Transportation Service ships are, for the 10th consecutive year, conducting "Sealift for Security" operations in and around our far northern radar and defense installations.

Greenland, Labrador, Newfoundland and the Baffin and Ellesmere Island areas will be visited by units of Task Force Six. Operations in Northern Greenland and on Ellesmere Island will take place within a few hundred miles of the North Pole.

More than 40 commercial, Coast Guard, MSTS and other Navy ships will take part in this year's operations, which will last until early December. By that time, nearly 173,000 measurement tons of dry cargo and more than two million barrels of petroleum will have been transported into the area.

The first two ships to go into the Arctic this season were USNS *Alatna*, a tanker especially built by MSTS with a reinforced icebreaker bow, escorted by the Navy icebreaker, USS *Burton Island* (AGB 1.) The two ships carried the first petroleum cargo of the operation into Sondrestrom, Greenland.

Two unique radio beacons are being used for the first time this year as aids to navigation. They are the second and third of their kind in the world. The first was installed two years ago at the entrance to Hudson Bay by the Canadian National Research Council.

These beacons operate completely unattended throughout the shipping season. They are triggered into action by a coded signal sent out by a ship's radio. The signal activates the beacon's transmitter which sends out a signal for five minutes. If a ship isn't able to plot its position in that time, the beacon can be activated again.

One has been installed at the entrance to Sondrestrom Fiord by the Navy icebreaker, USS *Atka* (AGB 3.) Previously, many ships have been forced to wait outside this harbor for days when fog was blanketing the jagged coastline.

The other beacon was installed in Melville Bay, Greenland, by the Coast Guard icebreaker, USCGC *Eastwind*. Melville Bay is the birthplace of most of the icebergs that reach the Atlantic. Giant glaciers from the Greenland ice cap flow into the sea along the bay's coast. The bay itself is filled with tiny islands and submerged rocks which have long been a hazard to ships operating in this area. The beacon will warn ships and enable them to avoid dangerous waters.

The first complete survey and charting of Melville Bay will be accomplished by a Navy Hydrographic Office team aboard the Navy icebreaker, USS *Edisto* (AGB 2.) Existing charts of this area are incomplete or inaccurate.

Atka will escort the first convoy of ships to Thule, Greenland. She will also aid the dock landing ship, USNS *Lindenwald*, and an underwater demolition team in conducting beach explorations and clearance along the Greenland coast. Ice movement along the coast causes new rock and earth obstructions each year, which must be blasted away before supplies can be landed on the beaches for coastline installations.

Another underwater demolition team will operate with a Canadian team and the salvage ship, USS *Opportune* (ARS 41), installing submerged petroleum lines at Goose Bay, Labrador. The joint teams will also attempt to remove a rock ledge which hazards the entrance to the Goose Bay channel.

USNS *Redbud*, assisted by *Burton Island*, will repair or replace submerged petroleum lines at Sondrestrom.

Geodetic survey parties from the Army Mapping Service and a relief crew for the Coast Guard Loran Station at Cape Christian will be transported to Baffin Island by *Eastwind*. The two teams will conduct surveys on Baffin and Padloping Islands.

The Coast Guard icebreaker, USCGC *Westwind*, will take a Canadian Defense Research Board party to Lake Hazen on Ellesmere Island. She will also assist in developing a natural landing strip at Polaris Promontory near Thule.

Sites on the GAP-PINE line in northern Labrador will be supplied by the MSTS cargo-barracks ship, USNS *Towle*. *Towle*, with 81 Army

INDOCTRINATION—A monk from the Saint Laurence Monastery, Brisbane, Australia, looks through telescope on the Long Beach-based *USS Prichett*.

stevedores aboard, will replace a dock landing ship previously used in this area.

Central Canadian Arctic coastal areas are slated to be maintained by a Canadian commercial transportation service. Foxe Basin and the east coast of Baffin Island will be resupplied by Canada's Department of Transport. American and Canadian Air Force planes airlift supplies to interior sites and joint weather stations.

Several new procedures have been developed over the past years to cope with special problems encountered in the Arctic. An important new development initiated last year is the use of compressed air hoses on the harbor bottom at Thule. Air bubbles escape from punctures in the hoses and carry warmer bottom water to the surface. This prevents ice from forming on the surface, thus creating a "polynya" or open space in the ice. "Project Polynya" has made it possible to operate ships in and out of Thule much later in the season than nature would otherwise permit. This system will be improved and expanded at Thule and may be installed in other Arctic harbors.

The Navy also has a continuous program of recording ice movement and behavior by use of aircraft reconnaissance and ice observer teams. The teams, composed of Navy aerographers, make daily observations and record ice changes, then relay the information to the Navy Hydrographic Office to aid ship movements. The air reconnaissance is part of a year-long tabulation of ice conditions carried out by a Long Range Ice Reconnaissance and Ice Forecasting Group.

Only Her Crew Gets Around

Although USS *Recruit* (TDE 1) has never known salt water and has never been in a drydock, she has probably had more men serve aboard her than any other ship in the Navy.

Each day the training ship rings with the sounds of General Quarters, fire drills, and chemical attack alarms. In three large classrooms aboard *Recruit*, men are taught the skills needed to transform them from civilians into effective Navymen.

Recruit has served well during the past 10 years, and with the exception of instructors, she has been manned exclusively by naval recruits. She is not a ship that travels much. During her career, *Recruit* has never left her concrete berth aboard the U.S. Naval Training Center, San Diego, Calif.

ON THE WAY—Test vehicle for Navy's newest air-to-surface guided missile *Corvus*, makes successful flight after firing from A4D *Skyhawk* at Point Mugu.

Left Foot Forward—Everytime

Sailors *can* march.

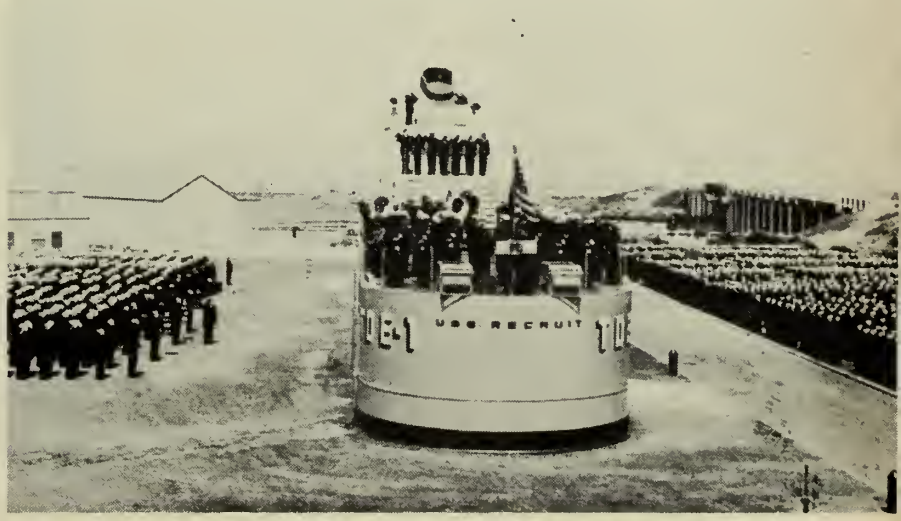
A 20-man precision marching unit, from Fleet Aircraft Service Squadron 10 stationed at NAS Moffet Field, is furnishing Northern Californians with plenty of proof for that statement.

The all-volunteer group, organized just a little over a year ago, has entered 13 competitive marching events since that time, and has 13 championship trophies to show for it.

Included in the sweep have been wins before more than 25,000 spectators at Moffett Field's Armed Forces Day celebration, and before a throng of more than 100,000 at the Miss California pageant in Santa Cruz.

Perhaps the most satisfying triumph of all, though, came in the Novato Western Days parade last June. The *FasRon* 10 team's twelfth straight victory broke the 36-straight win streak of an Air Force drill team which had been flown in especially for the Western Day's parade.

GOING NOWHERE—*USS Recruit* (TDE 1) with home port at NTC San Diego, Calif., has helped make many civilians into sailors in the last 10 years.



FOUR OF A KIND—A quartet of A4D-2 *Skyhawk* attack bombers roars overhead in formation during carrier operations from *USS Saratoga* (CVA 60).

PC Sinking of *U-375*

A former German submariner's curiosity about the fate of his World War II U-boat has brought a decoration to CAPT R. D. Lowther, USN, for something that happened almost 16 years ago.

The former sailor, Karl Stephan, was a crew member of the German *U-375* during the war. When his sub sailed on her last patrol in the Mediterranean he was in a hospital.

Since the war he has done a great deal of research to find out how his ship and his shipmates met their doom. In his research he learned that USS *PC 624* was the American ship which must have sunk his own on 30 Jul 1943. He also learned that CAPT Lowther had been the PC's skipper at the time, obtained the captain's address through the U. S. Naval Attache at Bonn, Germany, and wrote the captain to ask about details of *U-375's* final moments.

This inquiry, together with official documents on U. S. and German wartime operations, made it possible to identify positively both ships involved and to give official recognition to the American skipper.

The recognition came in the form of a Gold Star in lieu of a third Legion of Merit (with combat distinguishing device authorized) for Captain Lowther, who now commands USS *Dixie* (AD 14). The accompanying citation states in part:

"For exceptionally meritorious conduct in the performance of outstanding services . . . . .

"While escorting a convoy of six LSTs from Sicily to Bizerte, Tunisia, Captain (then Lieutenant Commander) Lowther picked up an unidentified radar contact closing on his port bow and immediately issued orders to illuminate the target with star shells. Recognizing the contact as an enemy submarine about to submerge, he fired several rounds of live ammunition before losing radar contact with the now submerged U-boat.

"Upon learning from his underwater sound operator that the submarine was still closing, Captain Lowther quickly altered his course, successfully evaded two torpedoes fired at his ship, and then skillfully pressed home his attack with depth charges, sinking what was later positively identified as the *U-375*."

DLG 8 Launched

The Navy's newest guided-missile frigate, *Macdonough* (DLG 8), has been launched at a Quincy, Mass. shipyard.

Macdonough is 512 feet long, 52 feet wide, and has a draft of 20 feet. Her armament will include the *Terrier* missile, torpedoes, and antisubmarine and conventional destroyer-type weapons. She was designed for antisubmarine warfare and airborne early warning, and will have a crew of approximately four hundred men.

The ship is named for Commodore Thomas Macdonough, USN, who entered the Navy as a midshipman in February 1800. He took part in the war with Tripoli on board USS *Constellation* and then served as first lieutenant in USS *Wasp* from 1807 to 1808.

In the War of 1812, Macdonough commanded the Naval Forces on Lake Champlain. Here he built and skillfully led the fleet that defeated the British in 1814. This victory, of immense strategic significance, placed his name on the roll of the Navy's great. Commodore Macdonough died at sea on 10 Nov 1825.

WESTERN LADY—*USS Edson* (DD 946) approaches moorage at home port in Long Beach, Calif., where she serves as flagship of Destroyer Squadron 23.

WHO'S NEXT—Supply office on *USS Pollux* is busy spot. *Rt:* Electronic gear is passed to *USS Salisbury* Sound (AV 13).

Fifty Thousand Items — All for You

WHEREVER SHIPS AND MEN of the Fleet go they can't sail far without a great quantity of supplies at hand. To keep the Fleet operating around the globe, Navy's Supply Corps maintains depots and centers on land and floating 'department stores' at sea.

Among these cargo and stores-issue ships is USS *Pollux* (AKS 4). She works the sea lanes of the Western Pacific. Her sales route extends from home port at Yokosuka, Japan, to the Philippines via Okinawa, Formosa and Hong Kong.

The 459-foot general stores issue ship is manned by 18 officers and 231 men. With her sister ship USS *Castor* (AKS 1), *Pollux* replenishes ships of the Seventh Fleet with operational necessities ranging from paper clips to complicated electronic gear.

In her five huge holds *Pollux* carries approximately 50,000 different items that include paint, hardware, clothing, medical supplies, electronic and ordnance gear and office supplies. Taking care of the job of stocking and issuing all this is a supply office manned by eight officers and 50 storekeepers, making it one of the largest offices of its type afloat.

Fleet supply requisitions are normally delivered by hand but in case of emergency they are received by radio message. When an order comes in the supply office checks on the availability of requested items, posts the prices on stock record cards and then prepares invoices which are channeled to the appropriate hold as guides for the breakout and consolidation.

A time and place is set for the ships to rendezvous. The orders for supplies are transferred by highline if underway at sea or are delivered by motor launch if both ships are moored in port.

In addition to her replenishing job, *Pollux* carries Fleet freight on special request. Fleet freight may involve items not normally carried by the ship. *Pollux* also has an exchange repair facility for electronic gear. As a component arm of the supply office, this facility services and repairs electronic items for Fleet units. When repaired the gear is re-issued to another ship in need of such item.

As a unit of an underway replenishment group assigned to deliver general stores to the Fleet at sea, USS *Pollux* is charged with the never-ending job of meeting the constant needs of Navy ships in the Far East any time, any place along her sea-going sales route.

END OF RUN—Stores issue ship *USS Pollux* (AKS 4) moors in Subic Bay. *Above:* Fleet freight order consisting of jet engines is passed to carrier.

SHOVING OFF—A team of tugboats helps get USS *Midway* (CVA 41) off to a good start as she leaves her pier at U. S. Fleet Activities, Yokosuka, Japan.

That Makes Five E's

USS *Randolph* (CVA 15) has carried away five departmental E's and won the Battle Efficiency Pennant for the third straight year in competition with units of COMNAVAIRLANT.

Randolph was named winner in operations, air, engineering, gunnery and communications.

At the same time, COMNAVAIRLANT announced that E's were awarded to the support carrier USS *Valley Forge* (CVS 45) and seaplane tender *Duxbury Bay* (AVP 38).

In the Pacific Fleet, COMNAVAIRPAC has awarded Battle Efficiency Pennants to attack carrier USS *Hancock*, (CVA 19) support carrier *Hornet* (CVS 12) and seaplane tender *Onslow* (AVP 48).

U.S.-Canadian Softball

A 10-run first inning highlighted a recent wild and woolly international softball clash at the Naval Station, Charleston, S.C.

The big first-frame explosion enabled Atlantic Fleet Mine Force Division 42 to coast to a 13-7 win over a Canadian Mine Force team, and retain the Commander Wadds Trophy.

Symbol of friendly softball competition between the two Mine Forces, the Wadds Trophy was established a year ago. It's named for a Royal Canadian Navy officer who was formerly Base Superintendent at Point Edward Naval Base, Sydney, Nova Scotia.

Inscribed on the plaque are the Gaelic words "Leann Aibh Sinn," which means "Follow me," the motto of the minesweepers.

This year's game was played during a break in Sweep Clear Exercises conducted by the Mine Forces of two countries. An annual affair, the NATO maneuvers were staged out of Charleston this summer. A year ago they were held off Nova Scotia.

MinDiv 42 managed but six hits off two Canadian hurlers—but walks, errors and wild pitches all contributed to the first inning shambles. Winning pitcher Paul Holman recovered nicely from a shaky start to hold the visitors to seven hits.

Recognition for a Fine Record

The attack carrier USS *Ranger* (CVA 61) and the support carrier USS *Antietam* (CVS 36) are the first winners of the Admiral Flatley Memorial Award for aircraft carrier accident prevention.

The new award, which will be presented annually to one attack and one support aircraft carrier, is named for the late Vice Admiral James H. Flatley, USN, a naval aviator associated with carrier aviation throughout most of his career.

During 12,500 landings aboard *Ranger* in fiscal year 1959, only six deck accidents were reported. This is particularly significant since this was her first full year of Fleet operations. *Ranger* recently returned to her home port of Alameda, Calif., after completing a tour of duty in the Western Pacific.

Antietam has alternated between antisubmarine operations in the Atlantic and carrier landing qualification work for Fleet units and the Naval Air Training Command. She is currently operating in the Pensacola, Fla., area.

During fiscal year 1959, there were 19,966 landings aboard *Antietam* without a single major accident. This, too, is significant, since many of these landings were made by student pilots under instruction.

Ranger and *Antietam* will keep the Flatley Trophy for one year and receive a replica of the plaque for permanent custody.

PacFlt Subs Win E's

Four Pacific Fleet submarines have won "outstanding" designations in over-all Force competition, and will wear proficiency "E" for the next year.

Two of them, USS *Greenfish* (SS 351) of Squadron One, and *Tiru* (SS 416) of Squadron Seven, are Pearl Harbor based. The others—*Razorback* (SS 394) from Squadron Three, and *Salmon* (SSR 573) of Squadron Five—operate out of San Diego.

The four winners demonstrated the highest degree of battle readiness over the past year.

Thermos Bottle Suits

A high-altitude suit that works like a thermos bottle at altitudes where the temperature drops far below minus zero, has been tested for the first time in the latest of a Navy series of manned, balloon flights.

The cold-weather clothing, combines the century-old principle of radiant heat transfer with the new technology of metalizing fabrics.

In the most recent Project Strato-Lab flight, the new suits were worn by Robert H. Cooper, of the High Altitude Observatory of the University of Colorado, and Commander Malcom D. Ross, USNR.

The primary insulating assembly of the suits consists of two rubberized fabrics coated with thin aluminum film and arranged so that a spring-like plastic spacer holds the two fabrics apart. The aluminized surfaces, facing each other with the spaces between, provide excellent insulation and reduce heat transfer by radiation. In the rarified air fringing the stratosphere, the assembly works in a manner somewhat similar to a thermos bottle.

The bright aluminum film surface serves a two-fold purpose. During daytime flights, the sun's intense heat is reflected away to keep the wearer more comfortable. At night, the metal surface reduces the loss of radiant heat from the man to the frigid air he finds about him.

Pan-American Games

Fourteen Navymen were among those selected to represent the U. S. in the Pan-American Games in Chicago 27 August - 7 September.

Three of these were pistol champ Gasper DeFino, TM1, skeet shooter Ken Pendergras, AEC, and tennis star ENS Mike Franks.

Others were: Carl Helton, ADC, NARTU, NAS Anacostia, Skeet Shooting; ENS Lewis Stieglitz, BuPers, Track and Field; ENS Jeff Farrell and ENS Walter Rose, both from NROTC Unit, Yale University, Swimming; ENS James Margolies, Com Three, and ENS Roland Wommack, MIDN Joseph Paletta and MIDN Alphone Morales, all of the Naval Academy, Fencing; ENS Robert L. Beck, Fort Sam Houston, Texas, Modern Pentathlon; MIDN Charles Davis, Naval Academy, Baseball; and ENS Harry Parker, Com Four, Rowing.

The Navy athletes, as well as all members of the U. S. squad, were selected after surviving trials involving thousands of eligibles from colleges, universities, the armed forces and athletic clubs.

The third Pan-American Games involved teams from more than 25 countries in North, Central and South America.

International Pistol Record

The 1959 National Rifle and Pistol matches at Camp Perry, Ohio, produced still another Navy winner.

Gasper DeFino, TM1, from NTC San Diego (See ALL HANDS, Sep 1959, p. 28) ended the meet as new International Match Pistol Champion, and set a new International aggregate record of 1130 out of a possible 1200 in the process.

Aggregate scoring is the combination of 50-meter slow-fire and 25-meter rapid-fire scores. DeFino topped all shooters in slow-fire competition with 549x600, one point off his own national match record, and then took a fourth in rapid-fire with 581x600 to break the old aggregate mark of 1128 set by MSgt H. L. Benner, USA, in 1954.

Navy team mates of DeFino who won place awards were A. A. Letourneau, BMC, USN, from Com 11; CDR R. K. Minard, USN, from NAD Earle, N.J.; V. H. Farr, GMC, USN, from Com 13; Donald McCoy, AOC, USN, of Com 10; M. C. Martin, ETC, USN, of NTC San Diego, and T. D. Elton, AD1, USN, Com 12.

SIDELINE STRATEGY

YOU'VE HEARD of Daniel in the lion's den. Somewhat in the same boat, sportswise, is a 290-man Naval Air Special Weapons Facility that a seagoing man might think would be lost among a 3500-strong Air Force complement at Kirtland AFB near Albuquerque, N. M.

Long odds have never scared the Navy, though, and NASWF's small but willing force steamed full speed ahead into Kirtland's all-sports intramural program. They weren't there just to participate—they came to win.

Today the 1958-59 Kirtland Commander's Trophy is being proudly displayed in Navy headquarters aboard the giant AFB.

The Commander's Trophy is awarded at Kirtland to the team compiling the most points during the year in the Base's varied sports program. Needless to say, winning the 1958-59 award against almost overwhelming numerical superiority has provided a big boost in morale for the tiny Navy outpost in the middle of the New Mexico desert.

★ ★ ★

Still in the realm of the unusual, we take up the case of Chief R. S. Hall, recently of Clarksville Base, Tenn. For the past 18 months Chief Electrician's Mate Hall has held a most unNavy-like post—that of a part-time Base Game Warden.

Chief Hall's appointment as Game Warden carried with it a request to see what he could do about the Base's burgeoning deer population. The deer, apparently, is an extremely prolific animal, for an original stock of one buck and four does in 1949 had mushroomed into a herd of more than 400 which was stripping the Base clean of vegetation by 1958.

Here's where Chief Hall and the Tennessee Game and Fish Commission stepped in. In 1958, Hall and his helpers, using traps supplied by the Commission, snared and relocated 86 deer. The 1959 season saw another 167 deer trapped and moved to other areas.

In addition to his deer relocation program, Chief Hall supervised the release of 80 wild turkeys on the Base. That done, he enlisted the aid of an Army Engineer battalion from nearby Fort Campbell, Ky., to construct a dam on a stream which flows through the Base. One hundred fifty rainbow trout have been released in the spring-fed lake above the dam, and several hundred fingerlings are scheduled to join them.

Chief Hall recently left Clarksville for another assignment, but his accomplishments as Game Warden will be in evidence for many years to come.

★ ★ ★

We'd like to pass on to you the results of a weird rowing contest held not long ago in Pohang Harbor, Korea.

Any resemblance between the Henley Regatta and the races staged by the high-speed transport USS *Cavallaro* (APD 128) is strictly accidental. Rubber boats were employed in contrast to the sleek shells used in the Henley test, the Harvard-Yale classic, the Olympics and other rowing extravaganzas.

Copping championship laurels in the first race, over a 1500-yard course, was a Republic of Korea Marine crew, which sloshed over the finish line just seconds ahead of the U. S. Navy UDT-12 standard bearers. The Korean Leathernecks averaged 5.4 knots in paddling the course in 8½ minutes. —G. F. M., JO1, USN.

SERVICESCOPE

Brief news items about other branches of the armed services.

A BLOOMING MISSILE SHELTER, which opens like the petals of a flower, has been developed by the Army for use with the *Jupiter* intermediate-range ballistic missile.

The weatherproof shelter is designed to cover the lower portion of the rocket, creating a water-tight seal that protects instruments and equipment until the rocket is ready to be fired.

Developed by the Army Engineer Research and Development Laboratories, Fort Belvoir, Va., the shelter is made up of a dozen 30-foot aluminum panels shaped like flower petals. After installation, the petals radiate from a circle around the missile. When preliminary adjustments on the *Jupiter* are completed, synchronized motors raise the panels so that they enclose the rocket. When the missile is ready for firing, electronic equipment takes over, causing the panels to open and return to the ground.

Doors in the 30-foot sections allow workers to go inside for inspection of the launching apparatus. Other openings admit fuel lines for the missile. The interior of the shelter is coated with a paint capable of resisting temperatures above 1000 degrees Fahrenheit.

★ ★ ★

A TWO-YEAR MODERNIZATION PROGRAM for a statistical communications network handling space age data has been launched by the Air Force.

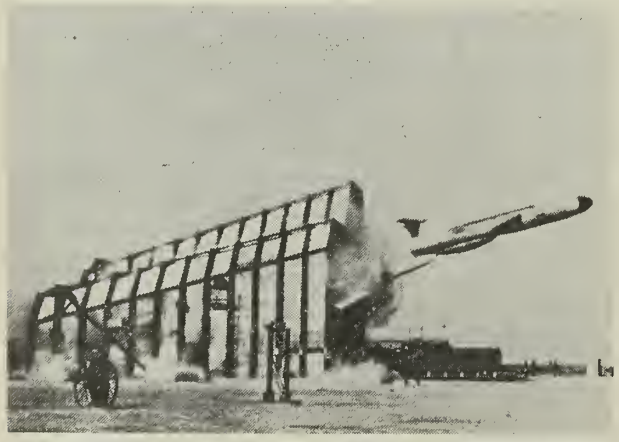
Transmission facilities for the proposed world-wide system will be operated by the Airways and Air Communications Service of the Military Air Transport Service.

The new network will use electronic machines that will tie in almost every Air Force and aviation industry activity into a global communications system for procurement, operations and administration.

Through this system, the Air Force will, by 1961, be able to order parts from five supply-control bases within a matter of seconds. Electronic "brains," storing information at various Air Force stockpiles, will supply the information automatically.

Here's how the system will work:

Suppose there is an immediate need for ballistic missile nose-cones on the east coast of the U. S.



SHELTERED LIFE—The Air Force's tactical missile Mace is launched from a "simulated shelter" during a test.

HIGH FAST ONE—An Air Force B-52 releases the *X-15*, built for a joint NASA-USAF-Navy space flight program.

Information is filed into the network in statistical form on a punched card, a teletype or a magnetic tape.

The message is relayed to Norton AFB, Calif., where missile records are kept. Norton's electronic device, the first to be installed in the system, will provide information on the supply of nose-cones: how many are available and where.

When nose-cones are ordered and sent, the machine adjusts its inventory and stores the information for a future request on nose-cones.

Part of the multi-million dollar system will be working in the U. S. by 1960, over wires leased from private industry.

Eventually, the network will be extended overseas by the Air Force. Cryptographic equipment will be installed to keep information from being picked up by enemy listening posts.

The network will be able to carry two and one-half million statistical cards a day compared to a million-a-day capacity on the old network—a manual operation without electronic equipment. It is geared to handle 400,000 messages an hour in peak periods.

★ ★ ★

A NEW MOBILE multi-channel radio set has been developed for the Army to be used in forward area combat communications. It is one-third smaller and weighs only half as much as field equipment now doing the same job.

The equipment is housed in a standard Army shelter mounted on a three-quarter-ton truck and is designed to give the field forces reliable communications to meet the needs of today's "Pentomic" Army. Its mobility was tested during a demonstration when two Signal Corps soldiers set up the entire equipment and had it operating on the air in 24 minutes.

Designated AN/GRC-53, the set provides 400 radio frequency channels in the band of 50 to 150 megacycles. It can provide simultaneous transmission facilities for 12 traffic channels over paths of up to 20 miles. The system can be used simultaneously by 24 persons without interference.

The new radio is rugged and will withstand vehicular movements over rough terrain as well as parachute drops, helicopter lifts and other methods of transportation.

Compared to present equipment, the new radio has

an increased band width which allows greater number of frequencies to be used in an operational area and decreases its vulnerability to either friendly or enemy-generated interference. The set carries its own power supply, antenna equipment and cabling in a standard Army trailer.

★ ★ ★

LARSON AIR FORCE BASE in the state of Washington has been selected as a launching site for the *Titan* intercontinental ballistic missile.

This is the eleventh ICBM base selected by the Air Force to date.

Three other Air Force bases have been named to support the *Titan* program. They are at Lowry, Denver, Colo.; Ellsworth, S. D.; and Mountain Home, Idaho.

The remaining seven ICBM bases handle the *Atlas* missile. They are located near existing Air Force bases at Francis E. Warren, Wyo.; Vandenberg, Calif.; Schilling and Forbes, Kans.; Offutt and Lincoln, Neb.; and Fairchild, Wash.

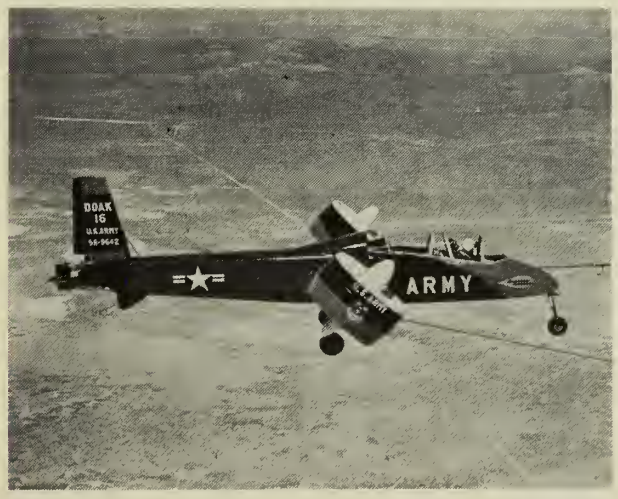
★ ★ ★

A NEW FIELD AIR DEFENSE SYSTEM has been set up by the Army to pinpoint information on the approach of enemy planes and feed it instantly to Army missile batteries.

Known as the AN/MSQ-18, the new system is housed in five 2½-ton Army trucks. One truck contains Operations Central—the other four, various electronic coder-decoder devices. These devices can assimilate data on the location of attacking aircraft and relay it in rapid sequence to Army missile emplacements such as *Nike-Hercules, Nike-Ajax* or *Hawk.*

The entire unit may be manned by a single operator. Through him the area commander can assign specific airborne targets to each battery.

AN/MSQ-18 can be used as part of Missile Monitor, a mobile air defense coordinator and control system designed for tactical use overseas. Added information would then be available through Missile Monitor's new three-dimensional radar, Frescanar, which simultaneously computes range, azimuth and altitude.



FANTASTIC — In the air, Army *VZ-4DA* swivels ducted fans which let it fly either straight up or straight ahead.

ON ITS OWN after leaving mother ship, *X-15* makes its first glide test flight. It will probe fringes of outer space.

A LIGHTWEIGHT THERMOELECTRIC GENERATOR, described as "the most powerful ever built," has been developed for the Air Force.

Weighing only 40 pounds, the radically new generator is about the size of a medicine ball. Officially known as TAP-100 (Terrestrial Auxiliary Power, 100-watts), the generator can convert the heat of a burning fuel directly into electricity on a scale large enough to light an average room.

This compact generator delivers three times as much power per pound of weight as any previously known generator. It is also the most efficient and compact device of its type for applications other than laboratory study.

It burns propane, the bottled gas used in house trailers, but is not limited to this single fuel. Modifications of the generator will permit use of other fuels such as gasoline and kerosene.

The new generator operates at a temperature of 850 degrees Fahrenheit. It converts the heat of the flame directly into electricity. Typical of thermoelectrical devices, the power plant has no moving parts.

The TAP-100 will furnish compact power sources necessary for remote sites.

★ ★ ★

A MOBILE RADIO COMMUNICATIONS system geared to the demands of small wars and brush-fire combat operations in trouble spots anywhere in the world has been developed by the U. S. Army.

The new equipment can be transported by air or moved overland. An entire system—with 46 operating personnel—can assemble, load into three C-124s, and be airborne within 12 hours. Four hours after arrival at any point the communications central can be ready for interim operations.

Listed as the AN/TSC-16, it has an operational range of 1000 to 2000 miles, and provides more voice and teletypewriter channels than were ever before available in a mobile system.

Designed for fire-brigade operation, it can accompany field commanders into critical areas, giving them almost immediate contact with the Army's global communications system. A task force commander in Southeast Asia, for example, could join the world-wide network at points in Okinawa, Japan, the Philippines or even Hawaii. Through any of these points he could talk directly with the Army Staff in Washington, D.C.

The entire package, which consists essentially of a single-sideband 10-kilowatt transmitter and receiving equipment, is contained in two vans, which, with tractors and power trailers, weigh about 70,000 pounds.

THE WORD

Frank, Authentic Advance Information On Policy—Straight From Headquarters

• **MEET BUWEPS**—The Bureau of Ordnance (BuOrd) and the Bureau of Aeronautics (BuAer) have been consolidated into a Bureau of Naval Weapons (BuWeps). The new bureau was officially established 1 Sep 1959.

Both BuOrd and BuAer will continue to function separately, however, during an interim period. Actual operation of BuWeps should begin about 1 Jan 1960. Originally a target date of 1 Jul 1960 was set for placing the new bureau in operation.

BuWeps will have four operating areas, each under the direction of an Assistant Chief. These areas are: Research, Development, Test and Evaluation; Procurement and Production; Fleet Readiness; and Field Support.

Here are some of the objectives of the bureau:

• To provide an effective organization for the development and procurement of naval weapons and weapon systems.

• To integrate the many phases of modern weapons systems.

• To bring a unified approach to the development of weapons systems rather than two parallel approaches which occurred under the two related bureau systems, particularly in the missile field.

Rear Admiral P. D. Stroop, USN, has been nominated by the President to be the first Chief of the Bureau of Naval Weapons.

"Go ahead chief, ask him something, he just made 3rd class."

• **ADVANCE PAY RULES TIGHTENED**—It's going to be tougher to draw advance pay upon transfer from now on.

Too many Navymen have drawn a dead horse without sufficient reason in the past; spent most or all of the money while on leave and in transit, and wound up in serious financial difficulty at their new stations while the advanced pay was being deducted from their paychecks.

Now commanding officers have been told to check each advance pay request thoroughly to determine if such assistance is really necessary.

When a request is approved, an individual will get only so much as can be repaid without jeopardizing his future financial condition.

• **WARRANT OFFICER PROMOTIONS**—Over 1200 Warrant Officers have been selected for promotion. A SecNav-approved list of names has been published in SecNavNote 1421 of 22 Jun 1959.

Of these, 658 were selected for promotion to W-2, 508 for W-3, and 41 for W-4.

Commanding officers have been instructed to order selected warrants who will be eligible for promotion during calendar year 1959 to be physically examined in accordance with BuPers Inst. 1416.7. All other warrants listed will take their physicals in December 1959.

• **EARLY DISCHARGE**—Enlisted personnel who do not intend to remain on active duty are being separated one month ahead of schedule.

The early separation is authorized by BuPers Inst. 1910.17, which applies to both Regular and Reserves (including TARs) who would normally complete active obligated service between 1 Oct 59 and 30 Jun 60.

It does not affect those transferring to the Fleet Reserve or retired list, Regulars planning on immediate reenlistment at the end of their present hitches, or Reserves who wish to continue on active duty beyond the date when their active obligated service would normally expire.

Early release for Navymen serving with deployed units may be delayed until return to the continental United States. The instruction does not, however, permit retention beyond the normal EAOS.

The early separations have been authorized so the Navy can operate within funds appropriated for this fiscal year.

• **WARRANT OFFICERS APPOINTED**—Seventeen first class and 34 chief petty officers have been given temporary appointments to Warrant Officer, W-1.

These appointments were from eligibility lists established by selection boards which convened in the Bureau of Naval Personnel in February 1958 and 1959.

The eligibility list from which this group was appointed is the last for WO. The Warrant Officer program is being phased out by normal attrition.

After this fiscal year, the only input into the WO program will be twice passed over LDOs who are allowed by law to revert to permanent Warrant Officer.

Regular Navy appointments made this time were broken down as follows: Aviation Operations Technician (7112), two; Aviation Ordnance Technician (7212), one; Boatswain (7132), three; Surface Ordnance Technician (7232), eleven; Ordnance Control Technician (7242), three; Aviation Maintenance Technician (7412), one; Electrician (7542), one; Machinist (7432), four; Electronics Technician (7662), four; Ship Repair Technician (7442), one; Ship's Clerk (7822), five; Supply Clerk (7982), nine; Medical Service (8172), five; and Civil Engineer Corps (8492), one.

"Relax sailor, it's a bos'n."

All Navy Cartoon Contest
LT B. E. Lodge, USN

"Don't worry, Captain, Combat reports a CPA of 270 degrees, 20 yards."

• **NEW PRO PAY RULES**—Most of the proficiency pay to be allocated as a result of the November examinations will go to career personnel. Proficiency pay awards not assigned to career personnel will go to non-career men and women.

Career personnel have been defined as men and women who have served or are obligated to serve for a period of seven years. If you are not in that category, you may extend your enlistment in accordance with article C-1407, *Bureau of Naval Personnel Manual.*

Commands are no longer restricted in the number of persons they can recommend. Commanding officers are now encouraged to nominate all outstanding men and women; not just a certain percentage as in the past.

Most of the pro-pay will go to those career men and women in pay grades E-4 and E-5 who are in critical ratings. Critical ratings for fiscal year 1960 proficiency pay purposes are: AC, AE, AG, AM, AQ, AT, BR, BT, BU, CE, CT, DM, DT, EM, ET, FT, GF, GS, IC, IM, JO, LI, MA, ML, MM, MR, MU, NW, OM, PH, PM, PT, QM, RD, RM, SF, SM, SO, SV, SW, TD, TM, and UT.

To be eligible for pro-pay, you must be serving in a billet which utilizes your technical specialty. You must also have completed all practical factors, performance tests, and training courses for the next higher pay grade.

YN, PN, SK, DK, and HMs assigned to recruiting service who are considered to be working in their rating, are eligible to compete.

Also eligible, besides those listed in BuPers Inst. 1430.12, are persons with an NEC in the 9900 series who are assigned to and working in special programs. These include such programs as UDTs.

Those filling BuPers-controlled instructor billets are also eligible for pro-pay. These may include instructors in leadership, or other subjects that do not deal strictly with one rating.

Those persons working in "general" billets—such as driver or mess hall master-at-arms—and senior and master chief petty officers, are not eligible to compete for proficiency pay in fiscal year 1960.

Proficiency pay examinations for E-4 and E-5s will be held on 3 November. E-6 and E-7 personnel will be examined on 5 November.

• **LITHOGRAPHER RATING CHANGE**—Further changes in the LI (Lithographer) rating, made to conform with modifications of the Enlisted Rating Structure, have been approved by SecNav.

The new changes: redesignate the general service rating of Lithographer as a general rating in all pay grades; disestablish the Lithographer T (Camera and Platemaker) and Lithographer P (Pressman) emergency service ratings; and establish Navy Enlisted Classifications (NECs) to identify skills formerly defined by the LIP and LIT emergency service ratings. Such NECs will also serve to identify inactive Reservists, and will be used to meet mobilization requirements.

• **INFO FOR SHIP'S HISTORIES**—The Director of Navy History needs more and better information for the ship's history program.

Annual submission of ship's histories is fine, but it's not enough. Ships can considerably enlarge upon their stories by supplementing them with pictures, documents, citations and other supporting material.

Cruise books, Welcome Aboard pamphlets, pictures of commissioning, launching and other ceremonies, and photographs of the ship's entering or leaving foreign ports are just a few of the examples the Ship's History Section would welcome.

COs, PIOs and any others interested in a more effective presentation of the story of their ship's contributions to the Navy are urged to submit all items of possible interest to the Director of Naval History.

QUIZ AWEIGH

This month's quiz is all about naval aircraft and missiles. See how well you can do before turning to the answers on page 55.

1. Match the names and designations of these planes:

(a) *Skyhawk*	(1) AD-5N
(b) *Skyraider*	(2) F8U-1
(c) *Vigilante*	(3) A4D
(d) *Savage*	(4) A3J-1
(e) Crusader	(5) AJ-2

2. Surface-to-surface missiles, used by the U. S. Navy, are named for (a) winged creatures, (b) birds of prey, (c) mythological terms, (d) astronomical bodies.
Sidewinder, (c) *Oriole,* (d) *Bullpup?*

3. Which of the following is not an air-to-air missile. (a) *Sparrow II,* (b)

4. Match the squadrons with their correct initials:

(a) Heavy Attack or Mining	(1) VS
(b) Antisubmarine	(2) VR
(c) Photographic	(3) VAW
(d) Carrier Airborne Early Warning	(4) VAH
(e) Transport	(5) VAP

5. The only carrier-based aircraft which does not have folding wings is the (a) A4D-2, (b) A3J-1, (c) AD-6, (d) A4D.

The answers to this month's Quiz Aweigh can be found on page 55.

THE BULLETIN BOARD

How the Navyman Joining Fleet Reserve Counts Service Time

PERHAPS NO ONE particular Article in the *BuPers Manual* has caused such a stir of letter writing lately as C-13407(1).

That article is aimed toward the career man who is nearing retirement. It could be of particular interest to the career E-6 who is nearing his 20 and figures in his own mind that he will never make chief.

In case you can't break the *BuPers Manual* loose from the ship's office, Art. C-13407(1)(a) reads in part:

". . . In computing Naval service for transfer to the Fleet Reserve, complete enlistments during minority count as 4 years, and any enlistment terminated within 3 months prior to expiration of the term of such enlistment counts as the full term for which enlisted."

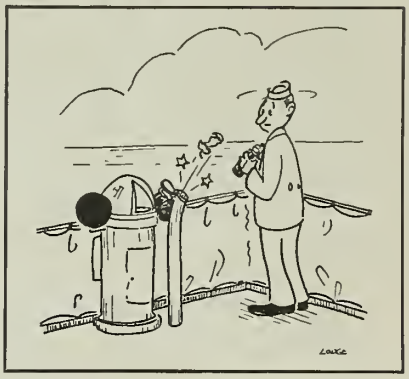
To get the full picture, it is necessary to quote a section of part (b) of the same Article:

". . . In computing active Federal service for transfer to the Fleet Reserve a fractional year of service of six months or more may be counted as a full year."

With the meat of both parts of the Article in mind, let's use a hypothetical case which should clarify some of the questions which concern computations of service for transfer to the Fleet Reserve.

The man used in the example on this page is a CPO who enlisted on

All Navy Cartoon Contest
LT Billups E. Lodge, USN



a minority cruise when he was 17 years and nine months old and had *no* lost time during his career. The same principles of figuring pay can be used for any pay grade.

As you can see in the table, on 23 Feb 1956 the man had served 14-03-04 day for day, with constructive time of 16-00-00. He could then reenlist for six years on 24 Feb 1956, serve until 3 Sep 1959, have 19-06-10 constructive time and only 17-09-14 actual time.

Based on present pay scales, and if he decided to go out on 3 Sep 1959, his retainer pay would be $170.00 a month. This is computed by multiplying $340.00 (over 18) by two-and-one-half per cent, times 20.

Why is it correct to use the base pay figure of "over 18" when he only served 17-09-14? Without adding confusion, just go back to part (b) of Art. C-13407(1).

To carry the chief's case out further, suppose he decided to stay until 29 May 1961. He would have served 19-06-10 day-for-day, and have constructive time of 21-03-06. In this case, his retainer pay would be computed as $350 (over 20) multiplied by two-and-one-half per cent, times 21 (years of constructive service). His retainer pay would be $183.75.

The above, as we said, is a hypothetical case.

Since this subject has apparently become the main topic for discussion in the Fleet, what are some of the questions that have been coming in? By selecting a few, maybe they will help to erase some of the questions you've been asking yourself.

• *Just what is constructive service?*

The term "constructive service" means service for which credit is given although not actually performed.

• *What's the difference between day-for-day time and constructive service time?*

Day-for-day time is the number of days, figured on the basis of 30 days to a month, that you actually served while in the federal service. This includes all service in the Army Navy, Air Force, Marine Corps, Coast Guard, or any reserve component thereof. It also includes State National Guard when it is activated and mustered as an integral part into the U.S. Army.

• *Is constructive service computed automatically or must I ask for it in my request for transfer to the Fleet Reserve?*

Computation has been automatic since 13 Mar 1959.

• *How long before retirement date can I put in my papers?*

Up to one year before going out. (See Art. C-13402(1), *BuPers Manual*).

• *If I complete exactly* 22 *years*

How to Compute Service for Transfer to Fleet Reserve Here's a Sample of a Typical Navyman

ENLISTED/REENLISTED	DISCHARGED	DAY-FOR-DAY TIME Yr. Mo. Day	CONSTRUCTIVE TIME Yr. Mo. Day
20 Nov 1941 (minority)	19 Feb 1945	03—03—00	04—00—00
20 Feb 1945 (for 4)	20 Nov 1948	03—09—01	04—00—00
21 Nov 1948 (for 2)	21 Aug 1950	01—09—01	02—00—00
22 Aug 1950 (for 2)	22 May 1952	01—09—01	02—00—00
23 May 1952 (for 4)	23 Feb 1956	03—09—01	04—00—00
24 Feb 1956 (for 6)	* 3 Sep 1959	03—06—10	03—06—10
	**29 May 1961	05—03—06	05—03—06

*Date on which man could go into FR using constructive time.

**Date on which man could go into FR using day-for-day time.

of service as of midnight on the date of transfer to the Fleet Reserve, would I be entitled to compute my retainer pay on the basis of 22 full years of active federal service for percentage multiple purposes? And would I be considered as having completed over 22 years of cumulative service for the purpose of establishing the applicable rate of basic pay to be used in the computation of retainer pay?

Although the question is lengthy, the answer is short. Yes.

• *What is the rule on figuring lost time?*

This gets complicated, so look at SecNavInst. 1626.4 of 11 Dec 57.

• *Why were some requests being returned to those who wanted to use this constructive service in computing time?*

No other reason than for the man's own protection. At the time, the Comptroller General had not ruled on the pay angle and the Chief of Naval Personnel didn't want anyone to get hurt.

• *What if I set my date for transfer and, through my own fault, put down the wrong one?*

The correct date will be set for you when your time is computed in the Bureau and you will be notified if there is any change.

• *What happens if I go into the Fleet Reserve with 19½ years and become disabled with less than 30 per cent disability before completing a total of 20 years?*

You would be placed on the retired list at the same rate of pay. You would *not* get severance pay.

New Inspection System for Shore Establishment

The Navy is revising its system of inspections of shore establishments to place primary emphasis on support of the Fleets.

The Secretary of the Navy and the Chief of Naval Operations have ordered the revised system of planning and conducting comprehensive surveys throughout the Navy.

The basic plan, which went into effect 1 July, calls for one survey each year for all major activities in a naval district or geographical area. Each area or district will be scheduled for a survey period limited to about one month. During the inspection period, a detailed itinerary of inspections will be scheduled.

Smaller activities will be inspected by the district area commander during the 11-month period.

Detailed instructions are being published which establish the responsibility for these surveys.

Coordinated planning and adherence to the annual schedule by the Naval Inspector General, the management bureaus or offices, and the district, should provide better exchange of information.

The new concept is designed to reduce the burden on the Naval Shore Establishment and shore-based Fleet activities caused by the visits of numerous survey parties.

HOW DID IT START

Invasion of Alaska

During World War II, part of what is now the United States of America was occupied by enemy troops.

This occupied area was in the Aleutian Islands, now part of the 49th state of the Union. The time was the summer and fall of 1942.

Plans for the occupation were laid in the spring of that year. The Japanese had taken Guam, the Philippines, Hong Kong, Singapore, and the Dutch East Indies. After these victories, they planned to move across the Central Pacific through Samoa and Midway, and north to Adak.

Admiral Yamamoto had the operation carefully planned. His main group of ships would go to capture and secure Midway Island. One day before this attack, to divert attention to the north, he planned a carrier raid on Dutch Harbor. The northern force would then proceed to capture Adak, Kiska and Attu in the Aleutian chain. The successful completion of these plans would have given the Japanese a base at Midway and one at Adak, just 1400 miles apart. From these bases, the entire Northern Pacific approach to Japan could have been guarded by Japanese planes.

Right on schedule, on 3 Jun 1942, Dutch Harbor was raided by the Japanese aircraft carriers *Ryujo* and *Junyo*, the heavy cruisers *Maya* and *Takoo*, and three destroyers. Although hampered by bad weather, the Japanese Air Group led by LCDR Samejima, did considerable damage to the facilities at Dutch Harbor.

The next day when the group was supposed to attack Atka and Adak—the Japanese thought we had military installations there but we didn't—bad weather forced a change of plans, and the Japanese again attacked Dutch Harbor. This time, much damage was done, including the burning of the barracks ship, *Northwestern*.

After launching the attack planes, *Junyo* left to rendezvous with her aircraft. Unbeknown to her, the rendezvous point was in clear view of the U. S. fighter strip on Unimak Island.

Although the American planes were outnumbered, they did shoot down several Japanese aircraft in the exchange of fighting. Two of our fighters were downed. The carrier got away to fight another doy.

The story of the assault on Midway, where the big blow was to be struck, is well known. Four of their aircraft carriers were sunk, and many of their other ships were badly damaged. A rather hurried retreat ended this plan of attack.

In a move to salvage something of the original plan, Admiral Hosagaya, on the Aleutian flank, wanted to capture some United States territory—namely the Aleutians. After much deliberation, Admiral Yamamoto gave his permission to attack Kiska and Attu.

Kiska was no great victory. The U. S. had 10 men there at a weather station. Eventually they were all captured. One of the 10 however—an AQ by the name of House—held out for 50 days before finally surrendering.

At Attu there was only a village of sixty Aleuts, the Indian Commissioner and his wife.

The Japanese occupation was short-lived. Slowly, U. S. forces moved back down the Aleutian chain. A base on Adak was developed, and then another at Amchitka. In May 1943, the U. S. triggered an amphibious assault on Attu. At Kiska, the Japanese embarked their 5100 men in two light cruisers, *Kiso* and *Abukuma*, and six destroyers, and steamed away in the fog.

That was the end of the occupation of the Aleutians by the Japanese—the occupation of land which is today part of the state of Alaska.

USN Opportunities for Junior USNR and Temporary Officers

THE OUTSTANDING junior officer who now holds a Reserve commission, or a temporary commission in the Regular Navy, has a good chance to become a permanently commissioned career officer through the Regular Navy Augmentation Program.

This program is a continuing one, designed to increase the over-all number of USN officers and to alleviate the shortage of officers in certain year groups. Under the program, which is covered by BuPers Inst. 1120.12G, unrestricted line and staff corps Reserve officers from the rank of ensign through lieutenant may be considered for appointment as permanent commissioned officers in the Regular Navy.

Certain unrestricted line and Nurse Corps officers temporarily serving in the grade of LCDR are also eligible. The instruction does not apply to Medical and Dental Corps officers or those with designators 14xx, 15xx and 16xx, except 1625 (law).

A new provision in the instruction confines the augmentation of temporary limited duty officers to the unrestricted line (1100) or staff corps. The Bureau of Naval Personnel has completed a study to determine the amount of commissioned service required of LDOTs before they can be considered for appointment to permanent LDO status.

It has been determined that all LDOTs will be considered for appointment to permanent LDO status at the same time they are considered for promotion to the grade of lieutenant commander. Since applications will not be required, all applications previously submitted to the Chief of Naval Personnel are being returned to the officers concerned.

If you're interested in a permanent Regular commission, but you're not sure of the qualifications, this rundown will give you an idea of what the program is all about.

Eligible male applicants are:

• Line (11xx and 13xx) officers with or junior to lineal number 31431-10 (as per NavPers 15018 of 1 Jan 1958). Aviation ground (1355) officers will be considered for appointment to the unrestricted line (1100) or staff corps categories for which they may qualify.

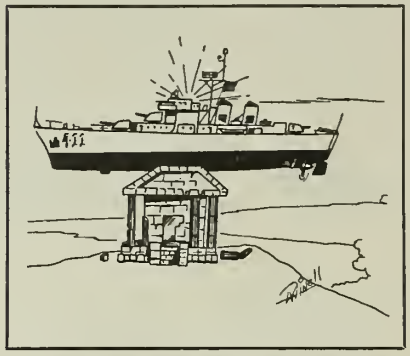
• Medical Service Corps (23xx), Supply Corps (31xx) and Civil Engineer Corps (51xx) officers not senior to a lieutenant with date of rank of 1 Feb 1955 or later.

• Temporary limited duty officers (17xx, 18xx, 37xx or 57xx) not above the grade of lieutenant with a date of rank of 1 Feb 1955 or later. They may apply for appointment only in the unrestricted line (1100) or staff corps for which they qualify.

• Officers of the Chaplain Corps (41xx) not above the grade of lieutenant with a date of rank of 1 Sep 1956 or later.

Applications for transfer to the restricted line as Special Duty Officers (Law) (Designator 1620) are particularly desired from qualified Reserve officers with at least one-and-one-half years' sea experience, who are not above the grade of lieutenant with a date of rank of 1 Feb 1955 or later.

All Navy Cartoon Contest
Cartoon by Dwinell



"If the calculations are correct, we'd now be passing over the Acropolis."

All Navy Cartoon Contest
Donald B. MacDougall, SMCS, USN

"When Higgins burns classified material you know it's gone."

Eligible women applicants are:

• Line (11xx) and Supply Corps (31xx) officers not above the grade of lieutenant.

• Medical Service Corps (23xx) officers equal or junior to the grade of a lieutenant with a date of rank of 1 Feb 1955.

• Nurse Corps (29xx) officers not above the grade of lieutenant. An exception is made for those officers selected for and/or temporarily appointed to the grade of lieutenant commander with, or junior to, lineal number 31431-10.

Other requirements are as follows:

• Citizenship — All applicants must be U. S. citizens.

• Service and Active Duty—All officers must have completed 12 months of active commissioned service and be serving in the grades already indicated. In computing this time, training periods at naval schools, flight training or any other duty under instruction for more than 30 days will be excluded. This is to make sure the applicant's performance in his primary duties has been observed and evaluated for at least one year.

Officers who have been released to inactive duty are eligible. Reserve officers undergoing flight training cannot put in for the program unless they have had at least 12 months' active service before entering flight training. You may not submit an application for augmentation in code category 1310 until 12 months after you have successfully completed flight training and been designated a Naval Aviator, unless you had 12 months' active service before you entered flight training.

• Dependents—A woman officer is not eligible if she: is the natural or adoptive parent of a child under 18; has personal custody of a child under 18; is the step-parent of a child under 18 who lives within her household for more than 30 days a year; is pregnant; or is the mother of a child under 18 for whom she has not lost all rights of custody and control through formal adoption proceedings.

For male officers there are no restrictions as to dependents.

• Education—For Line and Supply Corps officers there are no formal educational requirements. However,

since you will have to compete against your Regular Navy contemporaries for promotion and assignment, you should be about the same age as they are and have about the same education.

Applicants for the Medical Service Corps (2300) (all sections) must meet the educational requirements for original appointment in specialty and/or section of the Medical Service Corps.

A Chaplain Corps (4100) applicant must be a graduate of an approved school of theology, or have completed at least 90 semester hours (three years) of graduate work in a school of theology. He must also have completed at least 120 semester hours of undergraduate work besides the 90 hours mentioned above. No duplication of credits is permitted. In addition, he must present a new ecclesiastical endorsement of approval from officials of his denomination, authorizing his acceptance of a Regular Navy appointment.

Civil Engineer Corps (5100) applicants must have a baccalaureate or higher degree in architecture or civil, mechanical, electrical, architectural or mining engineering.

Nurse Corps (2900) applicants must be high school graduates and registered nurses.

To apply for appointment as a Special Duty Officer (Law) (1620), you must hold a degree from a law school accredited by the American Bar Association and be a member of the bar of a Federal Court or the highest court of a State, a Territory or the District of Columbia.

• Age — Men recommended for appointment must be young enough to complete a total of 20 years of active service before they reach the age of 62. Nurse Corps officers must meet the 20-year requirement by the time they are 55, and other women officers, by the time they are 50. Those who would be eligible for retirement within three years of appointment will not be accepted.

• Physical—All applicants must meet physical standards appropriate to their grade, as established by the Chief of the Bureau of Medicine and Surgery. Minor defects, which do not interfere with satisfactory performance of duty, will not be considered disqualifying.

Applicants recommended for appointment in the Regular Navy will be designated in the status for which they made application, except that aviation ground (1355) and limited duty officers will be considered for appointment to the unrestricted line (1100) or staff corps categories for which they may qualify and officers whose specialty is clinical or experimental psychology may be considered for appointment in the Medical Service Corp (2300).

Except for Special Duty (Law) (1620) officers, those recommended for transfer will be assigned positions on the appropriate lineal list according to date of rank in the grade in which they are serving at the time of transfer and will be permanently appointed accordingly. Officers permanently appointed in grades lower

WAY BACK WHEN

How Naval Academy Got Its Start

When America's armed forces were just getting started, the training of officers for them was pretty much left to chance. In 1800, when President John Adams approved a plan for a national academy, the project failed, but the plan did become a guide for the foundation of the U. S. Military Academy at West Point in 1802.

Long after West Point was founded the Navy still took the view that "The place to teach seamanship is at sea." Our successes in the Naval War with France and the operations against the Barbary Pirates seemed to bear this out, but there were people who realized the increasing importance of the theoretical element in a naval officer's education.

Before long, the Navy's larger ships began to carry schoolmasters to instruct midshipmen in mathematics, elementary science, navigation and French. The hours set aside for classes always seemed to interfere with the ship's routine, and interruptions were frequent—especially during the War of 1812.

In 1821 a system of schooling in ships alongside the piers in Norfolk, Boston and New York was set up, but instruction was inadequate and discipline was a problem. Attendance was optional. The "young gentlemen," as the midshipmen were called, had no definite shipboard duties. Since they were allowed free gangway, they spent considerable time in extracurricular activities ashore.

Despite such conditions, pleas to Congress for a permanent and suitable school went unheeded. As early as 1829 the Secretary of the Navy reported the failure of the temporary school. Later secretaries made a number of fruitless recommendations for improvements.

In 1838 a step in the right direction was taken. Part of the Naval Asylum (now the Naval Home) in Philadelphia was set aside for a school to prepare selected midshipmen for their promotion examinations. The students still had free rein, much to the discouragement of their instructors. However, that situation improved after Professor William Chauvenet, a distinguished mathematician and scientist, took charge in 1842. He instituted various reforms and procured equipment which the school sorely needed.

Meanwhile, since the evolution from sail to steam was making the Navy more complex, the need for better trained officers was becoming more apparent.

A new era finally dawned in 1845, when George Bancroft was appointed Secretary of the Navy by President James K. Polk. That June the noted educator and historian called a meeting of the midshipman examining board at the Asylum. He urged its members not only to recommend an adequate course of study, but also to state that, in their opinion, Fort Severn at Annapolis, Md., would be a better place than the Naval Asylum for training midshipmen. (The Army had offered the fort to the Navy back in 1826, but the Navy hadn't accepted it.)

After 12 days of deliberation, the board agreed. Bancroft then asked the Army to renew its offer of Fort Severn, which the Navy took this time. The school was quietly transferred to the new site and, after everything was in running order, Bancroft asked Congress for an appropriation of $28,000 "for repairs, improvement and instruction at Fort Severn, Annapolis."

Over some resistance, the funds were granted. Commodore Franklin Buchanan was appointed the school's first superintendent. The first students—50 of them—assembled on 10 Oct 1845.

In 1850 the school was renamed the United States Naval Academy.

than the ones in which they were serving will be temporarily reappointed in the appropriate higher grade. However, no permanent appointment will be made above the grade of lieutenant.

If you are selected for transfer as Special Duty Officer (Law) (1620), your lineal position will be adjusted to the one you could hold if you had received three years' constructive credit computed from the date you established your qualifications as a law specialist or the date of your first commissioning, whichever is later.

Selections under the program will be based upon demonstrated ability in the performance of duty and sincere motivation for making the Navy a career. The individual's ability to compete with his contemporaries once he is selected should be carefully considered by his reporting senior before making a nomination for the program.

Applications are considered by a continuing board which meets at least once each quarter or—if the number of applications warrant it—every month. The board is convened by the Secretary of the Navy, and the results of the board's action are published in individual letters.

If you intend to apply for the program, you'll first want to consult BuPers Inst. 1120.12G. It contains all the details.

DIRECTIVES IN BRIEF

This listing is intended to serve only for general information and as an index of current Alnavs and NavActs as well as current BuPers Instructions, BuPers Notices, and SecNav Instructions that apply to most ships and stations. Many instructions and notices are not of general interest and hence will not be carried in this section. Since BuPers Notices are arranged according to their group number and have no consecutive number within the group, their date of issue is included also for identification purposes. Personnel interested in specific directives should consult Alnavs, NavActs, Instructions and Notices for complete details before taking action.

Alnavs apply to all Navy and Marine Corps commands: NavActs apply to all Navy commands; BuPers Instructions and Notices apply to all ships and stations.

BuPers Instructions

No. 1210.4C—Revises the billet and officer designator codes.

No. 1414.1D—Establishes a program of monitoring the hearing abilities of all Sonarmen and Sonarman strikers.

No. 1500.15D—Outlines the procedures to be followed in selection of all candidates for diving instruction and lists activities authorized to conduct diving training for both officers and enlisted personnel.

No. 1745.4C—Revises the method by which the Chief of Naval Personnel levies an assessment against profits earned by Navy Exchanges and ship's stores.

No. 1910.17 — Authorizes one-month early separation of enlisted personnel serving on active duty.

SecNav Notices

No. 1421 (20 August)—Announced approval by the President of a selection board which recommended Marine Corps officers for temporary promotion to colonel.

Navy's Own Flag

After 184 years without one, the Navy has adopted a flag of its own.

By Executive Order, President Eisenhower earlier this year approved the flag's design, which was submitted by the Secretary of the Navy. The order describes the flag as: "Of dark blue material, with yellow fringe, two-and-one-half inches wide. In the center . . . is a device three feet-one inch over-all, consisting of the inner pictorial portion of the seal of the Department of the Navy, in its proper colors within a circular yellow rope edging, all two-feet-five-inches in diameter above a yellow scroll inscribed 'United States Navy' in dark blue letters."

The flag's over-all dimensions are four-feet-four-inches hoist by five-feet-six-inches fly.

Before the new flag was adopted the only banner flown by the Navy during ceremonial, parade and display occasions was the U. S. Navy Infantry Flag (the blue battalion flag used to denote infantry units in landing forces). It was frequently used with the organizational flag of the Marine Corps. The new flag of the Navy will now take its place alongside the flags of the Army, Air Force and Marine Corps.

BuPers Notices

No. 1085 (29 July)—Provided for the expansion of the annual verification of records to include a verification of the member's Social Security number.

No. 1721 (30 July)—Emphasized the necessity for careful review of donated or locally purchased printed matter.

No. 5101 (3 August)—Distributed car accident statistics for 1958.

No. 6320 (3 August)—Reminded all personnel being separated or retired from active service that they must execute a statement to the effect that the member does or does not have an eligible dependent receiving civilian medical care at government expense upon the effective date of release.

No. 1910 (13 August)—Pointed out that errors are being made in processing personnel for discharge; reemphasized the need for compliance with relevant notices; and reiterated that these provisions are equally applicable to enlisted personnel on active and inactive duty except Fleet Reservists and retired personnel.

No. 1111 (14 August)—Provided information concerning the selection of enlisted personnel on active duty in the Marine Corps and Navy for appointment as midshipmen in the NROTC for the class entering school in the fall of 1960.

No. 1210 (18 August)—Advised personnel as to the procedures which will be used in transferring the numerical code designators of the 17xx and 18xx series to the new 6xxx series.

No. 1811 (21 August)—Informed all commands of the anticipated extensive retirements of naval officers during the current fiscal year.

No. 1530 (26 August)—Announced the selection of Navy and Marine Corps personnel for assignment to the Naval Preparatory School, Bainbridge, Md., as candidates for the U. S. Naval Academy.

No. 1321 (28 August)—Announced a revised system for issuance of officer's orders issued by the Chief of Naval Personnel.

No. 1430 (29 August)—Modified Inst. 1430.12, which is concerned with proficiency pay. Critical ratings are listed; and career personnel with seven or more years service will receive precedence for selection.

Received Orders to Korea? You'll Find a Number of Changes

IF YOU HAVE RECEIVED orders for duty in Korea, you'll probably be assigned to an advisory group as a representative of the United States government.

The primary mission of the U. S. advisory groups in Korea is to help their armed forces equip, train and develop balanced forces in sufficient military strength to defend that country against aggression.

The climate in Korea is similar to that found in New England and the Middle Atlantic states. Korea has four distinct seasons occurring at about the same time of the year and in the same manner as our seasons do. Spring and autumn are ideal, and the change to other seasons occurs gradually and pleasantly. Seoul, for example, has an average temperature of 52 degrees (New York: 53 degrees) while Pusan averages 56 degrees (Washington, D. C.: 56 degrees). The winters are relatively cold and dry and the summers hot with considerable rain. Korea receives more than half its yearly rainfall during July, August and September.

Housing—Housing in Korea presents no special problem. Single personnel, and those without dependents, are billeted in barracks or BOQs.

Dependent quarters are located in three cities, Seoul, Taegu and Pusan. These quarters range in size from two bedrooms to four bedrooms. Quarters will generally be of a one-story duplex type, with asphalt tiled floors, and are supplied with hot and cold running water, electrictiy and modern plumbing facilities, including bathtubs and showers. In addition, a majority of the quarters have an open fireplace in the living room and a screened-in porch at the rear. Each unit has a central, oil-fired hot air heating system. Water in dependent communities is furnished from a filter plant. (Water, elsewhere in Korea, except in military installations where it is delivered by tank truck, is not always potable without boiling or chemical purification.)

A host officer or PO is designated for each officer or PO assigned to Korea. Shortly after receipt of your orders, you will receive a letter from your host, or the chief of the activity to which you are to be assigned. He may need information from you as to the composition of your family, and any unusual requirements for equipment or domestic servants. Your host will attempt to have your quarters ready for occupancy when you arrive. He will be available to assist you with your processing and housing.

There are no garages provided, but ample off-street parking space is available within the housing compounds.

What to Bring—Ample storage space is available in your quarters for luggage, suitcases and footlockers. There is no storage space outside your quarters. It is emphasized that furniture and essential appliances (such as refrigerators, stoves, rugs and lamps) are provided for all types of housing to which you may be assigned. It is neither necessary nor desirable that you bring to Korea your own personal household belongings.

You should, however, take the following items to Korea; you will

WHAT'S IN A NAME

Guam

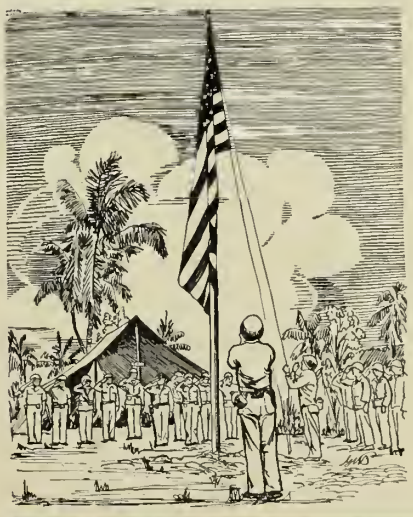
This year the island of Guam is celebrating the 15th anniversary of its liberation from enemy hands in World War II.

The island had been taken by a Japanese landing force on 10 Dec 1941. It remained under enemy occupation until 21 Jul 1944, when in the hot, humid dawn of a gray tropical morning, the Navy landed soldiers and Marines there to retake this important piece of property.

Guam, 15 years later, is quite a different place from the battered island where organized enemy resistance ended on 10 Aug 1944.

Only 30 miles long and seven miles wide, Guam has become one of the focal points of America's defense in the Far East. With its steadily improving Apra Harbor, which boasts one of the largest man-made breakwaters in the world, the island is taking on increasing importance as a stopover for both military and civilian ships.

In WW II the U. S. learned the "importance of Guam in the nation's over-all defense pattern." That lesson is not likely to be forgotten, for the island's ample harbor and large airfields point up the strategic value of Guam.



For this reason the Navy has spent millions of dollars to bolster its permanent facilities on the island. Almost everywhere, evidence of new construction can be seen.

Athough Guam is sometimes thought of as primarily a naval base, owing to the Navy's many years there, it is also a key Air Force outpost. Andersen Air Force Base, on the north tip of the island, is an important part of the Strategic Air Command.

In addition to her strategic significance, Guam is also the center of a comprehensive typhoon tracking system. Fleet Weather Central there sends out daily reports to ships of all nations to keep them informed on weather conditions.

Last year the island was the site of an IGY weather probe operation in which scientists from the University of Michigan, in cooperation with the Army Signal Corps, Navy and Air Force, fired *Nike-Cajun* rockets into the night atmosphere to obtain information about the weather in that part of the world.

Although Guam is designated an "isolated area," a tour of duty there doesn't mean giving up all the joys of comfortable living. The climate makes Guam an ideal spot for outdoor activity which ranges all the way from boxing to shell collecting.

Guam was discovered by Ferdinand Magellan on 6 Mar 1521. It has been under United States jurisdiction since the Spanish-American War, when USS *Charleston* took possession in the name of the U. S.

The people celebrating Guam's liberation anniversary this year will include Japanese, Chinese, American, Spanish, Philippine and other nationalities and races.

—J. A. Williams, JO1, USN.

need them (and in many instances they will not be available for purchase):

Cooking utensils, kitchenware, silverware, chinaware, glassware, linens, towels, wash cloths, bathmats, shower curtains, electric fans, linens, blankets, pillows (mattresses will be issued), drapes and curtains or material for them. (Material is available for sale at the PX, but the selection is often limited. Qualified Korean tailors or seamstresses will make the drapes or curtains at a reasonable price.)

If there's a baby in the family, bring along a bassinette, high chair, play pen and baby pillows.

If you want to bring them, the following items are suggested for your furnished quarters:

Radio, television, pictures and bric-a-brac, air-conditioning unit (casement window type), washing machine, dryer, magazine racks, additional lamps, traverse rods for drapes, curtain rods other than the standard type, books, games and toys, waste-paper baskets (local purchase is very inexpensive), clothing bags, musical instruments. Also, special equipment for use of infants and small children other than that listed above.

Such electrical appliances as juice blenders, sewing machines, irons, mixers, coffee pots, vaporizers, record players, vacuum cleaners, floor polishers, and the like, if desired, would have to be brought from the States.

It is strongly urged that sufficient quantities of cooking utensils, kitchenware, silverware, linens, towels, wash cloths and bedding be carried in hold baggage so they will be available for use prior to arrival of household goods. If air travel is anticipated, ship these well in advance (6-8 weeks). If there is an infant, or small children in the family, special equipment for their use should also be included. Such items are not readily available in Korea.

Washing machines, clothes dryers, and air conditioners that operate on 110 volts in the United States, will operate in Korea. Before you decide to bring these items, however, various factors must be taken into consideration. All windows in the dependent quarters are of the steel casement, French type, which would

All Navy Cartoon Contest
Jean E. Cornish, AT3, USN

"Sir, the new consultant's here."

preclude the use of the ordinary window-type air conditioner. Maintenance and repair work on washing machines and dryers is done by local residents who are not trained in the complexities of automatic equipment. Therefore, if you want to take these appliances, it's best that they be of the non-automatic type, in excellent condition and reasonably simple to repair.

Shipment of household goods will be limited to 2000 pounds or to 25 per cent of the weight limitation authorized by *Joint Travel Regulations*, whichever is greater—plus 40 per cent to cover weight of material used in packing and crating.

The standard electrical current in Korea is 110 v, 60 cycle, the same as in the United States. However, the voltage sometimes drops to as low as 85 volts, which will cause a minor inefficiency in operation of most common electrical devices. Step-up transformers are available at the Post Exchange to play radio and television sets during periods of voltage drops.

Domestic Help—Servants (maid, cook, laundress, houseboy or chauffeur) are available for hire through local billeting sections. Salaries are relatively low compared to rates in the United States. Generally, Korean servants have had some domestic background although many of them will require patient training in American housekeeping methods. Salaries vary considerably, depending on the servant's experience and the size of the family they are employed by, but the following guide may be helpful: cook—$40-$60 per month; nurse—$30-$40; laundress—$10-$20; combination housekeeper and laundress—$40-$50.

It is mandatory for prospective domestic employees to undergo a medical examination. This can be accomplished at U. S. military medical installations at no cost to you.

Commissary and PX—Commissary sales stores are located in the same place as dependent housing. These stores are modeled after the normal Stateside or overseas commissary and, even though small, stock a complete line of foodstuff items to include meats, fresh vegetables and fruits (in season), canned goods and frozen foods. Fresh milk is not obtainable from authorized sources, but condensed, evaporated and reconstituted whole powdered milk is available. All normal food necessities may be purchased in commissaries. Bakery goods are available in limited varieties. Food items must NOT be purchased on the open market.

The Post Exchange system provides merchandise and necessity items at minimum cost. These retail outlets sell necessary items for everyday use, plus a limited number of luxury goods, such as record players, cameras, radios, tape recorders, sporting goods and yard goods. Also available in the PX are items from Japan, Hong Kong, Bangkok and, of course, Korea.

Although the Post Exchange has a limited selection of clothing and footwear, dependents are strongly urged to bring an adequate supply to meet their needs for at least six months. It is also advisable to make arrangements with a local store in the States for special mail orders. Civilian clothing is not authorized for wear by the military in Korea except while engaging in athletics. However, it is recommended that some civilian clothing be brought as it may be worn on visits to Japan and other countries.

Uniforms—The seasonal periods for wearing the uniform are as follows: winter uniform from 15 October to 30 April, and summer uniform from 1 May to 14 October. There is no optional period for uniform changes.

Dress uniforms will be worn by officers, warrant officers and enlisted personnel at appropriate times and occasions.

Facilities—Barber shops, beauty shops, laundry and drycleaning service, watch repair, and shoe repair

are available through concessions operated by local businessmen.

Post Exchange ration books are issued to purchase restricted items such as cigarettes, some cosmetics, watches, cameras and electrical appliances.

Shopping on the local market offers rewarding purchases in brassware, lacquerware, children's dolls and ceramics. The same word of caution applies to shopping in Korea as in any other foreign country—in seeking a particular item, shop around, compare quality and prices to avoid overpaying for inferior merchandise.

Schools—Dependent schooling is provided in Korea with a curriculum designed to prepare pupils to meet the requirements of schools and colleges in the United States. Dependent students from the United States have little trouble adjusting to the overseas school.

Schools from first through eighth grade are located in all areas where families are housed. A high school, keyed to the United States college preparatory curriculum, and accredited by educational associations in the United States, will be in operation in Seoul for the fall semester of 1959. Dormitories will be provided for high school students whose homes are in Taegu, Pusan and Chinhae.

It is important that you bring transcripts of credits for the schooling already completed by your children, plus available information regarding their particular aptitudes and educational levels. Should you not be able to obtain transcripts, be sure to bring report cards. This will aid materially in placing the child in the proper grade.

After-hours college courses (University of Maryland) are offered at most major installations. There is no English language college operating in Korea.

Currency—The official currency of Korea is the *Hwan* paper money issued currently in denominations of one, five, 10, 100, 500 and 1000 hwan notes. No coins are minted in postwar Korea. The current rate of exchange is 500 hwan to one dollar, a fixed rate established by the Korean and U. S. governments.

Unit finance officers, Post Exchanges and the Seoul Branch of the Bank of America are authorized to exchange dollars for hwan at the established rate. It is illegal to exchange hwan for dollars.

Military Payment Certificates (MPC) in denominations of $.05 to $10.00 are available for exchange with U. S. currency before or immediately upon arrival. In military installations and facilities, you will use MPC exclusively. The possession and use of U. S. currency is not authorized in Korea. It is also illegal to transfer MPC to any person or agency not authorized possession.

Money orders may be obtained at any military post office, and travelers' checks and bank drafts may be purchased from the Seoul Branch, Bank of America. Within certain limitations, checks on U. S. banks are negotiable at any Post Exchange or at the Bank of America in Seoul.

Mail—For all military and Department of Defense personnel, mail may be sent via air or surface transport through Army post offices (APO). Normally, airmail to the States takes four to five days to the West Coast, and four to six days to the East Coast. Surface mail is about six weeks en route.

Expeditionary Forces Messages (EFM) may be dispatched through the APO in Korea. Delivery time averages 24-48 hours. Commercial cablegrams may be sent through the ROK Ministry of Communications in downtown Seoul.

Military amateur radio stations (MARS) located throughout Korea transmit brief personal messages, upon request, to amateur radio stations in the States. Personal telephone calls to the United States may be made over the commercial system for about $12 for three minutes.

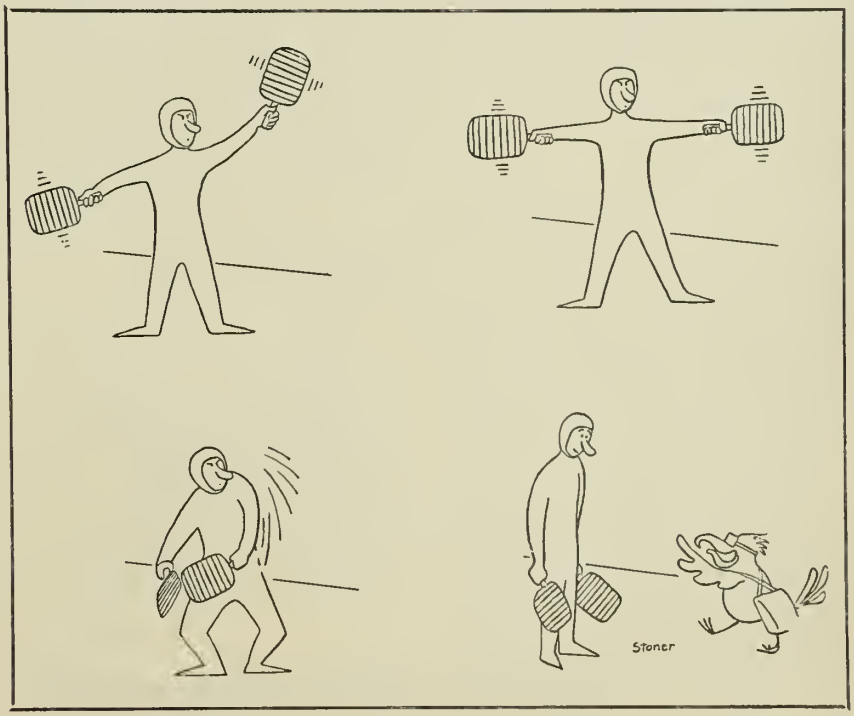
Religion—Religious facilities in the three major faiths serve the American military and civilian communities in Korea. Chaplains are frequently assisted by civilian missionaries who supplement Sabbath and week-day services.

Recreation—Aboard military installations, there are libraries, craft shops, spectator and participation sports, entertainment, workshops and clubs.

The libraries provide reading materials and furnish comfortable places to read and study. Craft shops encourage hobby pursuits with photographic laboratories, craft workrooms and craft stores where merchandise such as model airplanes, boat and car kits, photo paper, leather, radio and hi-fi kits are sold.

Spectator type sports activities include wrestling, boxing, basketball, softball and football. Participating activities include handball, badminton, table tennis, horseshoes, swim-

All Navy Cartoon Contest **Donald Reid Stoner, PN3, USNR**



ming, weight-lifting, archery, hunting, fishing and bowling. A golf course is available in Seoul. Hunting and fishing, as elsewhere, are carefully regulated in respect to season, take and area. Privately owned sporting weapons (rifles, shotguns and match or target revolvers and pistols) may be brought with you provided you comply with current regulations. Weapons must be registered with the Provost Marshall within 24 hours after the arrival of the weapon. Both fresh-water and deep-sea fishing are available, and for hunters, pheasants are plentiful.

The entertainment workshop sponsors amateur musical and dramatic productions periodically. Annual talent contests for the military feature elimination competition, with Far East winners competing in the States.

Clubs are available at all military installations and here you will find a variety of off-duty activities and entertainment including dances, parties, floor shows and bingo.

For your home entertainment, the American Forces Korean Network and numerous local radio stations offer an excellent variety of radio programs. One AFKN television station broadcasts programs in Seoul only.

The news is published daily in Seoul by two English-language Korean newspapers — the *Korean Republic* and the *Korean Times*. The Pacific edition of the *Stars and Stripes* is published in Tokyo and air-carried to Korea daily for sale and distribution to military activities and dependent areas.

Other periodicals and magazines are available either through Post Exchange facilities or by subscription through the mails.

Medical and Dental Care—Adequate medical and dental facilities are available to personnel and their dependents. A 50-bed hospital is available in Seoul. Temporary hospitalization will be provided in one dispensary at Pusan.

The hospital in Seoul is equipped to provide obstetrical, gynecological and pediatric care. The dispensaries are equipped to provide only emergency obstetrical, pediatric and gynecological care. Patients residing outside the Seoul area and who require extensive care will normally be transported to the hospital in Seoul. Outpatient treatment will be provided at all of the medical facilities.

All Navy Cartoon Contest
William Roger Maul, CT1

"You got Shore Patrol tonight?"

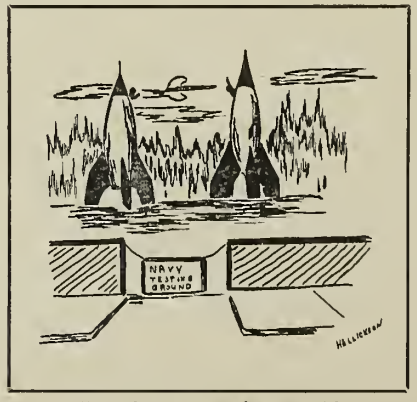
Dental care includes general operative, surgical and prosthetic treatment and will be available at the hospital in Seoul and the dispensaries at Taegu and Pusan.

Sponsors of dependents are encouraged to bring outpatient records of their dependents to insure continuity of treatment. Copies of prescriptions for medicines which have been provided by a family physician or medical officer to be taken continuously or intermittently by dependents should be in possession of the sponsor. A copy of the prescription for spectacles, if worn by dependents, should also be in the possesion of the sponsor.

All personnel entering Korea are required to have up-to-date records showing prescribed inoculations. Booster shots for all inoculations are obtainable in Korea.

Dependents should complete any necessary medical or dental treatment before departure from the United States.

All Navy Cartoon Contest
Ronald E. Hellickson, SA, USN



". . . Drag ya to the moon!"

Automobiles—Shipment of one privately owned vehicle (motor scooter, motorcycle, motorbikes are considered as vehicles) is authorized for personnel who will serve a 24-month tour in Korea. Korea has very strict laws on the ownership of vehicles by Koreans, and resale is not feasible and in most cases not possible. It is best to plan upon returning the vehicle to the United States upon completion of the tour.

At the port of embarkation, you will be given instructions for preparation of your automobile for shipment. These instructions are the responsibility of the Navy port commander.

Be sure your automobile is in first-class condition before you ship it. Whenever practicable, the automobile you ship should be in the so-called "light and low-price range." Replacement parts for cars will be very limited at the PX garage and will, in most cases, have to be ordered direct from the United States. Lock-type gas caps are required.

It may be five weeks to two months from the time you turn your automobile in at a West Coast port until you receive it. You will be notified when your car arrives and given information as to when and where you may receive it. Adults who intend to drive should bring with them a valid, current driver's license from some state in the United States in order to obtain a driver's permit from the Korean government. Personnel are required to obtain both a Korean and military permit and to have them in their possession while driving their cars, whether on or off duty.

Local regulations require all vehicles to be equipped with turn indicators (either the arm type or blinking light type).

Before shipping your vehicle you should check with your insurance company to make certain that your present automobile policy provides the desired coverage for Korea. Additional coverage for the period the automobile is in transit may be

desirable but is not required. You must carry a minimum liability of $5000 bodily injury (per person), $10000 bodily injury (per accident) and $5000 property damage, while your automobile is in Korea.

If you desire, this insurance can be obtained in Korea from an agent of an American company.

The quality of highways leaves much to be desired. There are few modern paved roads, and most of the streets are narrow, winding and heavily traveled by pedestrians and bicyclists.

Local Transportation — Military transportation is provided for children traveling to and from schools and for dependents going to and from the commissary when quarters are located beyond reasonable walking distance. In addition, periodic bus runs are scheduled to take personnel to various activities on the post.

Customs—Personnel and their dependents may bring into Korea, free of customs duties and such other charges, reasonable quantities of private property for personal or family use. Likewise, articles may be imported through military postal channels in reasonable quantities for personal use or for bona fide gifts. Cigarettes, liquor and PX items, in general, are not considered to be authorized gifts to Koreans. No property will be brought into Korea for the purposes of resale, barter or exchange with Korean nationals. All baggage and parcels, whether accompanying the individual or brought in through military postal channels, are subject to customs inspection by U. S. military authorities.

A separate passport is preferable for each member of your family who is 12 or more years of age. Children under 12 years may be included in the passport with the parent or other adult whom they accompany. For this a group photograph may be used. Your passport must be in your possession at time of departure from the United States. A port call cannot be issued for you to proceed to the port for transportation overseas until your passport is on file at the Port of Embarkation or information is available at the port that a valid passport is in your possession. Passports will be shown to immigration authorities at ports of entry and proper entry stamp will be obtained.

You may take with you cats and dogs, provided that they have no communicable disease. Dogs must have had rabies immunization within the preceding six months. Dogs less than 18 months old must have had inoculation for distemper.

Latest List of Motion Pictures Scheduled for Distribution To Ships and Overseas Bases

The latest list of 16-mm. feature movies available from the Navy Motion Picture Service, Bldg. 311, Naval Base, Brooklyn 1, N. Y., is published here for the convenience of ships and overseas bases. The title of each picture is followed by the program number.

Those in color are designated by (C) and those in wide-screen processes by (WS). Distribution began in July 1959.

The Wild and the Innocent (1351) (WS) (C); Melodrama; Audie Murphy, Joanne Dru.

Good Day for a Hanging (1352): Western; Fred MacMurray, Maggie Hayes.

Invisible Invaders (1353); Melodrama; John Agar, Jean Byron.

It Happened to Jane (1354) (C): Comedy; Doris Day, Jack Lemon.

The Bandit of Zhobe (1355) (WS) (C): Melodrama; Victor Mature, Anthony Newley.

The Man in the Net (1356): Melodrama; Allan Ladd, Carolyn Jones.

Hey Boy, Hey Girl (1357): Musical; Louis Prima, Keely Smith.

Day of the Outlaw (1358): Western; Robert Ryan, Burl Ives.

Warlock (1359) (WS): Western; Richard Widmark, Henry Fonda.

A Hole in the Head (1360) (WS): Comedy; Frank Sinatra, Edward G. Robinson.

The Young Philadelphians (1361): Drama; Paul Newman, Barbara Rush.

Shake Hands with the Devil (1362): Drama; James Cagney.

This Earth Is Mine (1363) (WS) (C): Drama; Rock Hudson, Jean Simmons.

Woman Obsessed (1364) (WS) (C): Drama; Susan Hayward.

Floods of Fear (1365): Melodrama; Howard Keel, Anne Heywood.

Tonka (1366) (C): Western; Sal Mineo, Philip Carey.

NOW HERE'S THIS

Bells Are Ringing

A bell ringing in the early hours of the working day tells the men of a U. S. Naval Detachment in Turkey that another man has reenlisted in the Navy.

The bell is rung by the reenlistee once for each year he has in the Navy and once for each year in his next hitch.

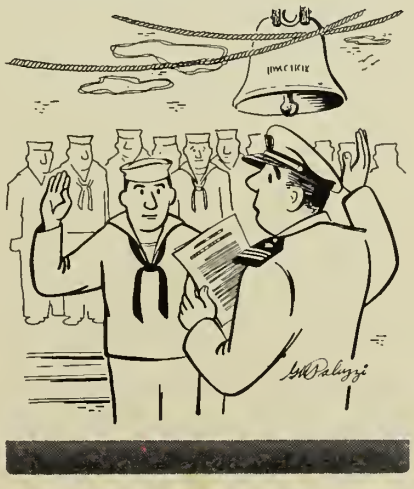
Salvaged from a scrap pile, the shipping-over bell is now hung in the office of the detachment's CO. It is rung only on the reenlistment occasion.

For the event, all the division officers and a group of enlisted men assemble in the CO's office. All hands come to attention when the man enters the room and goes before the mast—a lectern made from the mast of an old Turkish ship and presented to the command by a Turkish navy yard.

After the man has been sworn in, he autographs the Bible used during the ceremony, and signs the shipping articles. Then, he rings the bell to give the news to his shipmates.

The sound is now quite a familiar one to the detachment.

D. B. MacDougall, SMCS, USN



Just an Echo

A new device that simulates submarines electronically is being delivered to the Navy to speed training in antisubmarine warfare.

The new sonar trainer is the first to make training possible at sea without scheduling submarines to act as targets. Its synthetic target, indistinguishable from real "echoes," may be cleared from sonar scopes should a second target appear.

The electronic brain of the trainer fakes all maneuvers, including dives, varying courses, speed changes and very realistic torpedo attacks.

Commissions for Enlisted Men via LDO, Integration Programs

IF YOU ARE an enlisted man and want to become an officer, you have only a few months left to prepare yourself for the next examination. However, if you are successful, you can anticipate becoming an ensign in less than two years, via the LDO and Integration Programs.

It's not easy. In the past, many applicants have failed to prepare themselves adequately. Selection is based on more than a good score on the examination and an enthusiastic recommendation by your commanding officer.

After you have taken the test, the score—in addition to your record and application—goes before a selection board which meets annually in the Bureau of Naval Personnel (next board May 1960). It is at this point you are accepted or rejected. It helps if your record shows you have taken correspondence courses, evening classes, or have done other work to prepare yourself for your new rank.

It stands to reason that if two men are about equal in most respects—and all applicants should be outstanding—that a man who has shown some initiative and has studied is going to be selected over one who has not.

A new instruction (BuPers Inst. 1120.18F) lists the qualifications for both the LDO(T) and Integration Programs. The instruction gives all the information you will need to apply for either or both of the programs next March. The next scheduled examination for these in-service officer procurement programs will be in June 1960.

The expanded LDO(T) program will offer an attractive career opportunity to the young enlisted man desirous of obtaining officer status. It is to be noted that this program is designed for a 10-12 year officer career. Selection to permanent LDO status will be made concurrently with and contingent on selection for promotion to the grade of lieutenant commander.

Now that no more Warrant Officers will be selected, the number of LDO categories has been increased. Here is a complete list of enlisted ratings, and the LDO category and officer designator to which you would normally advance in this program.

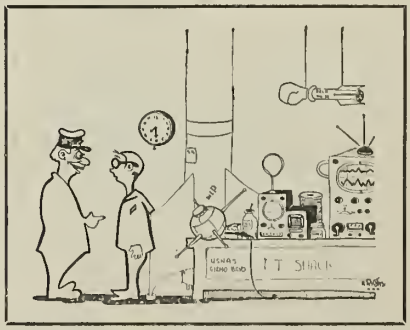
Normal Path of Advancement to LDO(T)

Enlisted Ratings	*LDO Category and Officer Designator*
BM, QM	Deck (600)
RD, RM, SM, SO	Operations (601)
GM, NW	Ordnance, Surface (610)
FT, GS	Ordnance, Control (611)
TM, MN	Ordnance, Underwater (612)
YN, PN, MA, JO, LI	Administration (620)
MU	Bandmaster (626)
MM, BT, MR, EN, IM, BR, OM	Engineering (630)
DC, ML, PM, SF	Hull (635)
EM, IC	Electrician (637)
ET	Electronics (640)
CT	Cryptology (646)
AB, AC, PR, PT	Aviation Operations (660)
PH	Photography (663)
AG	Aerology (665)
AO, GF, AQ	Aviation Ordnance (670)
AT, AE, TD	Aviation Electronics (680)
AD, AM	Aviation Maintenance (685)
DK, SK, AK, CS, SH, SD	Supply (370)
CM, EO, UT, CE, DM, SV, BU, SW	Civil Engineer (570)

Generally, you should apply for the category in your normal path of advancement. When you try for selection in a different category, you will be compared with other men who probably have much more experience in the field than you do. This in itself will hurt your chance for selection.

HMs and DTs, however, have no normal path of advancement to LDO. Although they may apply for any category in which they feel they are qualified, they are encouraged to apply for a commission in the Medical Service Corps rather than in the LDO field. The problem of competing with more experienced men also applies here.

All Navy Cartoon Contest
Erasmo Riojas, HM1, USN



"Oglethorpe, you'll have to knock off that cumshaw work!"

Men and women in the NESEP program may not apply for a commission under the LDO(T) or Integration programs since they are already in an Officer Procurement Program.

Here are the eligibility requirements for the Limited Duty Officer (Temporary) Program as stated in BuPers Inst. 1120.18F. You must:

- Be a citizen of the United States, either native born or naturalized.
- Be a male PO1 and above or a Warrant Officer or temporary commissioned Warrant.
- Have served as PO1 for one year by 1 July of the year of application.
- Be in the Regular Navy on the date of the written examination.
- Have completed eight years of active naval service (including U.S. Marine Corps and U.S. Coast Guard while operating as part of the U.S. Navy), exclusive of active duty for training in the Naval, Marine Corps, or Coast Guard Reserves by 1 July of the calendar year in which application is made.
- Be on active duty at the time you are being considered by a selection board, and if selected, remain on active duty until you receive your commission.
- Not have reached your 34th birthday on 1 July of the year application is made. If you are now an ensign or above or have served in the temporary grade of LTJG or above, the maximum age limit is raised to 37 years.
- Be a high school graduate or possess the service accepted equivalent.
- Meet the physical requirements, appropriate to the grade for which considered, as established by the Chief, Bureau of Medicine and Surgery.
- For the two years before 1 July of the calendar year in which application is made, have no record of conviction by general, special, or summary court martial, or conviction by civil court for any offense other than a minor traffic violation.
- Not make application in more than two officer designator codes under this program in any one year.

Current plans call for the input

of about 800 new LDO(T)s each year. Under the old system, only about 550 were selected.

Only about 50 men each year are expected to be selected under the Integration Program. The number here has been cut from the 200 formerly appointed for better selection of only the truly outstanding and highly qualified men who can compete on career officer standards.

To be eligible for the Integration Program, you must:

- Be a citizen of the United States, either native born or naturalized.
- Be at least 19 and under 25 years of age on 1 July of the calendar year in which application is made.
- Be a commissioned Warrant Officer, Warrant Officer, or an enlisted man or woman of the Regular Navy.
- Be recommended by your commanding officer.
- Have the following service and active duty computed to 1 July of the calendar year in which application is made:

(1) CWO, WO, and CPOs must have two years' continuous Regular Navy active service in grade in any of the three combined grades or rates.

(2) CPOs and below must have three years' continuous active service in the Regular Navy.

CPOs have the option of either of the above two.

All service must be continuous and in the Regular Navy, covering that period immediately preceding the submission of the application. Broken service of more than 90 days is disqualifying and Naval Reserve time cannot be counted.

- Fulfill one of the below educational requirements, unless you are applying for a commission in the Civil Engineer Corps:

Have successfully completed 30 semester hours of work at an accredited college or university, or have the service-accepted equivalent as defined in *BuPers Manual*, Article D2103(14); or be a high school graduate, or have the service accepted equivalent, and have a GCT or ARI score of 60 or above. (If applying for a commission in the Civil Engineer Corps, you must have completed three years of college credits toward an engineering degree at an accredited engineering school.)

- Have no record of conviction by general, special or summary court martial, or conviction of civil court for any offense other than minor traffic violations for the two-year period preceding 1 July of the calendar year in which application is made.
- Meet the physical requirements, appropriate to the grade for which considered, as established by BuMed.
- Meet, if a woman applicant, the dependency requirements as set forth in paragraph two, Article C-1102 of the *BuPers Manual*. (Gen-

ANSWERS TO QUIZ AWEIGH

Quiz away is on page 43.

1. (a) - (3); (b) - (1); (c) - (4); (d) - (5); (e) - (2).
2. Mythological terms. Pictured is the *Regulus I*.
3. (d) *Bullpup*, which is an air-to-surface missile.
4. (a) - (4); (b) - (1); (c) - (5); (d) - (3); (e) - (2).
5. (d) A4D.

Seabees Tame Snow Cats and Weasels on the Job in Antarctica

Even under ideal conditions, repairs to a piece of equipment can be difficult and time-consuming. To the construction mechanics at NAF McMurdo Sound, Antarctica, however, these repairs are done under some of the worst conditions known to men. They have found in Antarctica that the unusual is usual.

Headed by H. W. Birkett, CMC, these 10 Seabee mechanics—plus one seaman—are members of the Public Works Department under the direction of the PWO, LT L. J. Green and CWO A. P. Ells, the Equipment officer. They maintain 140 pieces of major equipment, most of which is special, non-standard items designed for sub-zero weather.

Besides their normal duties, these versatile CMs have shown ability and talent as carpenters by building a battery shop, engine overhaul shop, automotive electric shop, mezzanine for spare parts stowage, and office spaces.

W. M. Burleson, CMC—he made chief on 16 July—is the shop petty officer. This is his second winter in the Antarctic. He was a member of the Deep Freeze One wintering-over group.

Here are some of the accomplishments made by these Seabee mechanics during the last couple of months.

D. A. Fisher, CM1, and D. H. Edgar, SN, have completely checked over and repaired 20 weasels. For those who know weasels, this is no small task. For those who don't know them, just believe us—it is.

In addition, Fisher maintains the battery shop which he built himself. He also does most of the electrical work on the equipment. Edgar, who is not a Seabee by rate, has been doing the job of one.

W. R. Clem, CM2, and J. C. Trickett, CN, have completely checked over and repaired 10 snow cats. These two men also maintain the engine repair shop and have rebuilt 20 engines of various types. Most of these have been weasel engines. For Clem this is also his second winter in Antarctica. He too was a member of the Deep Freeze One wintering-over group.

M. C. Havener, CM2, and T. T. Baldwin, CM2, have devoted the biggest part of their efforts to the repair of heavy equipment. With such equipment as a crawler tractor which weighs 38 tons, the word "heavy" is an understatement. This is also Havener's second winter in Antarctica. He was a member of the Deep Freeze Two wintering-over group.

J. R. Martin, CM1, and T. C. Seale, CM2, also check and repair heavy equipment.

J. C. Crouse, CM1, who maintains and repairs the two main generators, has had his share of problems with them. Both were installed this year and as usual with new equipment, there have been a few bugs, all of which must be eliminated to maintain efficient operation. In addition to this job, he helps repair the vitally important transportation equipment.

erally, this says that you must not have a dependent child under 18 years old.)

• Not make application in more than two officer designator codes under this program in any one year.

Candidates considered twice by a selection board for the Integration Program are not eligible to make further application under that program.

If you are eligible for either of these programs and are interested in a commission, you must submit your request in writing to your commanding officer between 1 and 15 March of each year.

In your letter of request, you should state specifically, and in order of preference, the program title and the applicable officer numerical designator code and title for which you are eligible and want to be considered. You should also show your date of birth on this request.

Your commanding officer will take the ball from there. If he considers you officer material, he will order an examination from the Naval Examining Center, Great Lakes, Ill. Between 1 and 15 March, when you submit your request for consideration, and 15 June, when you take the examination, you will be asked to fill out numerous forms, and will be interviewed by a board of officers.

All Navy Cartoon Contest
David J. Majchrzak, DN

Also, probably early in June, you will take a physical examination. A list of the forms you will be asked to complete, application procedures, and a sample letter of application are attached to BuPers Inst. 1120.-18F.

The written examination is a multiple choice one which is divided into eight different parts. They are: Verbal Analogies, Arithmetic Reasoning, Mechanical Comprehension, Naval Knowledge, English, Mathematics, Science, History and Social Science. These titles may sound fairly simple to you, but don't kid yourself, the examination is difficult.

If you seriously want a commission under one of these programs, you should start studying now. You can't possibly cover each of these subjects thoroughly before next June, but at least you can do a lot of reviewing. It will help a great deal.

All men selected under the Integration Program are first ordered to the U. S. Naval Schools Command, Newport, R.I., for a 16-week General Line Officer Candidate course of instruction. (All women selected are ordered to Newport for an eight-week Officer Candidate (W) Training Course. After the eight-week course, they are appointed in the Line or Staff Corps of the Regular Navy, as appropriate, and then ordered to another eight-week officer (W) training course at Newport.)

But just finishing the course of study at Newport doesn't always assure you of a commission. A naval examining board then reviews your record to determine if you are mentally, morally, and professionally qualified to perform the duties of your grade. A professional examination may be administered if it is deemed necessary.

Those selected will be appointed Ensign in the Line (1100), Supply Corps (3100) or Civil Engineer Corps (5100) in the Regular Navy. Men may apply for flight training and if selected and if they complete the course, their designator will be changed to 1310.

Limited Duty Officers (Temporary) are also commissioned in either the Line, Supply Corps, or Civil Engineer Corps.

How to Take the Ocean's Temperature

The Navy has developed a new miniature sonobuoy which should improve ASW operations and pave the way for extensive exploration of the oceans.

The new sonobuoy was developed by Dr. Jesse J. Coop, a physicist on the technical staff of the Antisubmarine Warfare Laboratory at the Navy's Air Development Center, Johnsville, Pa. It weighs only five pounds and is one-sixth the size of sonobuoys currently used.

Basically, a sonobuoy is a floating device containing a hydrophone and a tiny radio transmitter. Underwater sounds are picked up by the hydrophone and transmitted to aircraft.

Previously, oceanographic acoustic surveys have been conducted mainly from ships and have required many extensive individual operations. Now these surveys can be speeded up through the use of aircraft and the new sonobuoys. These tiny listening and transmitting devices will provide linkage between aircraft and the ocean's depths; and will combine many operations into one.

Using transistors and subminiature components, these new sonobuoys will provide data on ambient sea noise, ocean depth, volume and surface scattering, bottom reflection and scattering, acoustic propagation and water temperature at various depths.

Small explosive charges dropped near the sonobuoy will be used to determine ocean depth by measuring time required for sound to travel to the ocean floor and back. Intensity of this bottom-reflected sound will give an indication of the acoustic nature of the bottom.

Other explosive charges dropped at increasing distances from the sonobuoy, and set to explode at various depths, will give the oceanographer a measure of the sound wavebending characteristics of the acoustical thermal barrier.

Water temperature will be reported by an "acoustic telemetering thermometer" dropped near the sonobuoy. As the thermometer sinks, changes in temperature will produce changes in the pitch of sound picked up by the sonobuoy and transmitted to the aircraft.

It is expected that the wide range of information gathered by sonobuoys will enable oceanographers to understand and perhaps predict changes in the mysterious thermal barrier. This barrier, changing shape with storm and season, distorts sound waves much as a prism distorts light rays.

DECORATIONS & CITATIONS

LEGION OF MERIT

"For exceptionally meritorious conduct in the performance of outstanding services to the Government of the United States . . ."

★ GOLDTHWAITE, Robert, VADM, USN, for exceptionally meritorious conduct in the performance of outstanding services in connection with the Naval Leadership Program of the United States Navy, while serving as Chief of Naval Air Training from August 1957 to May 1959. He established a Chief Petty Officer Academy to insure that petty officers in his command have a sound understanding of the moral foundations of leadership, as well as a solid grasp of the up-to-date techniques in both the psychological and managerial aspects of leadership. Vice Admiral Goldthwaite foresaw the potential of this program, recognizing that only with the aid of parallel movements within civilian communities could the Navy hope to obtain the services of men and women of high moral caliber.

★ WILL, John M., VADM, USN, for exceptionally meritorious conduct in the performance of outstanding services as Commander, Military Sea Transportation Service, from July 1956 to June 1959. Under his sound direction, the Military Sea Transportation Service provided timely logistic support during the Lebanon crisis in 1958, while continuing to meet its other commitments in all parts of the world. In September 1957, to insure two-ocean access to the DEW-LINE sites, he personally directed photographic reconnaissance missions over waterways in search of likely routes for the passage.

DISTINGUISHED FLYING CROSS

"For heroism or extraordinary achievement in aerial flight . . ."

★ ANANIA, Vincent J., LCDR, USN, for heroism and extraordinary achievement in aerial flight as pilot of a patrol plane in Electronic Countermeasures Squadron One during a routine training mission over international waters in the Sea of Japan on 16 Jun 1959. When two MIG fighter-aircraft of unknown nationality suddenly executed a series of attacks against his plane, wounding the tail gunner and inflicting extensive and severe damage, LCDR Anania skillfully maintained his aircraft in flight for 300 miles to Miho Air Base, Japan, where a safe landing was made.

★ COLLIER, John G., LTJG, USNR (posthumously), for heroism while participating in aerial flight as pilot of an aircraft in Patrol Squadron Forty-Eight, en route across the Cuyamaca mountains from the United States Naval Air Station, North Island, San Diego, Calif., to the Salton Sea, on 1 Jan 1959. When an uncontrollable fire started in the starboard engine, resulting in a rapid loss of altitude, LTJG Collier ordered his eight crew members to parachute, and immediately began to jettison fuel and to send out distress signals. With his co-pilot directing the bailing out of the crew, he skillfully guided the crippled aircraft away from inhabited areas and steadfastly remained at the controls until the plane's bombs and torpedoes were dropped in the clear, and his co-pilot had jumped. Parachuting at too low an altitude just before the plane crashed, LTJG Collier gallantly sacrified his own life to insure the safety of others.

★ DICKENS, Marshall E., LTJG, USNR (posthumously), for heroism while participating in aerial flight as co-pilot of an aircraft in Patrol Squadron Forty-Eight, en route across the Cuyamaca mountains from the United States Naval Air Station, North Island, San Diego, Calif., to the Salton Sea, on 1 Jan 1959. When an uncontrollable fire started in the starboard engine, resulting in a rapid loss of altitude, LTJG Dickens directed the parachuting of the eight crew members and elected to remain with the crippled aircraft to assist the pilot in dropping the plane's bombs and torpedoes in the clear, away from inhabited areas. Parachuting at too low an altitude moments before the plane crashed, he gallantly sacrificed his own life to insure the safety of others.

★ MAYER, Donald R., LCDR, USN, for heroism and extraordinary achievement in aerial flight as Aircraft Commander of a Patrol Plane in Electric Countermeasures Squadron One during a routine training mission over international waters in the Sea of Japan on 16 Jun 1959. When two MIG fighter-aircraft of unknown nationality suddenly executed a series of attacks against his plane, inflicting extensive and severe damage, LCDR Mayer skillfully directed the jettisoning of equipment in order to maintain his aircraft in flight for 300 miles to Miho Air Base, Japan, where a safe landing was made.

NAVY AND MARINE CORPS MEDAL

"For heroic conduct not involving actual conflict with an enemy . . ."

★ CRUM, Jimmie W., AMS2, USN, for heroic conduct in rescuing a man from drowning at Makaha Beach, Oahu, T. H., on the evening of 22 Nov 1958. Sighting a swimmer in distress approximately 50 yards offshore, Crum entered the treacherous waters and, despite the strong undertow and waves estimated at 20 to 25 feet in height, swam toward the victim in a daring bid to effect a rescue. Locating the drowning man in an unconscious condition beneath the surface, he succeeded in bringing him close to the shore where other rescuers assisted. Upon reaching the beach, Crum immediately applied artificial respiration. Owing to his unremitting efforts and subsequent medical care, the man regained consciousness.

★ FORD, Max E., BM1, USN, for heroic conduct while serving on board USS *Nipmuc* (ATF 157) on 10 Feb 1959. Observing that a shipmate had exhausted his strength and was in danger of drowning after an unsuccessful attempt to rescue another man from the heavy seas, Ford leaped into the icy water and swam a distance of approximately 30 yards through 10- to 12-foot swells to render assistance.

★ MALONEY, James D., CWO, USN, for heroic conduct while serving on board USS *Essex* (CVA 9) on the morning of 28 May 1959. When a fighter-type aircraft, upon landing, crashed into several other planes parked abaft the island on the flight deck of *Essex*, resulting in an immediate explosion and intense fire, Chief Aviation Operations Technician Maloney took charge of the situation and, in the face of blazing aircraft fuel, burning magnesium metal, and exploding oxygen containers, skillfully directed the efforts of the fire-fighting personnel in bringing the fire under control.

★ ZIPPERI, Paul, BM2, USN, for heroic conduct while serving on board USS *Nipmuc* (ATF 157) on 10 Feb 1959. Sounding the alarm when he observed a shipmate fall overboard Zipperi, aware that the ship might not reach the victim in time, leaped into the icy waters and swam a distance of approximately 75 yards through 10- to 12-foot swells in a vain attempt to effect a rescue. Suffering from exhaustion and exposure, he was helped aboard his ship.

BOOKS

SELECTIONS OFFER PLEASANT READING

YOU'D BE SURPRISED at the wide range of good reading material to be found at your ship or station library. Those selected for review each month are only a few of the new books received. If these titles do not suit your fancy, ask for what you want.

You'll never recognize ***John Paul Jones*** as viewed by Samuel Eliot Morison. Somewhat weary of the romantic nonsense stirred up by Jones' career, Morison has tried to give a well-rounded, balanced picture of the Navy's number one hero. In this version, Jones is primarily a human being but the gung ho aspects of his life are not neglected, either. The chapters concerning his early career, the fitting out of *Ranger*, his raid off the Scottish coast, the battle between *Bonhomme Richard* and *Serapis* are told with the exclusive Morison touch.

Paddlewheel Pirate, subtitled as the Life and Adventures of Captain Ned Wakeman, and written by Gordon Newall, is somewhat more offbeat. Although the title suggests it might be fiction, it is, in reality, the story of a merchant mariner whose career spread from sail to steam and the opening of the Far West. The "Pirate" portion of the title refers to an incident in which Wakeman sailed off in the Hudson River steamboat *New World* after she had been attached for debt in New York, and did not stop until he had rounded South America and dropped anchor in San Francisco Bay, five months and 15,000 miles later. That's just one phase of his career.

Embarcadero, by Richard H. Dillon, is along similar lines. However, this is a collection of true adventure stories. Using the San Francisco waterfront as the point of embarkation for each of his 13 yarns, Dillon ranges from the "Port of Gold" of 1849, sailing across the Pacific in a small boat, and the wreck of uss *Saginaw*. One of his tales is concerned with the kidnapping of seamen for the China trade—a practice so prevalent that the word "shanghaiing" has become a part of our vocabulary. Good subject matter, well presented.

The Siege of Peking, by Peter Fleming, is treated somewhat more seriously but is equally interesting. As earlier readers of ALL HANDS will recall (see October 1956 issue) in 1900 a force of the Chinese known as the Boxers besieged the diplomatic legations in Peking. The members of the legations were ultimately rescued by an expeditionary force of eight countries. The earlier ALL HANDS account told the story from the viewpoint of the U. S. naval forces. Fleming gives an over-all picture of the whole operation and, at times, is highly critical of the way in which it was handled.

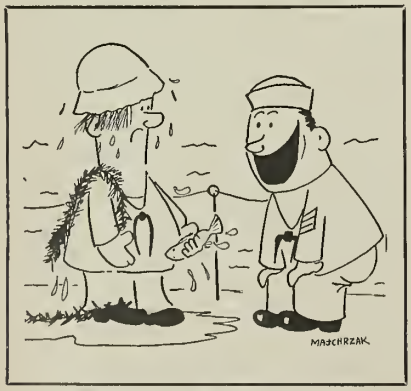
Using all the elements of a sure-fire whodunit, Thomas Gallagher, in ***Fire at Sea,*** tells the real life—and death—story of ss *Morro Castle*. Here's the plot: As the ship approached New York on her return Labor Day cruise from Havana, fire —which had burned unnoticed for some time—broke out. It had not been a happy trip, the author points out. There had been obvious mismanagement, says the author, hard feelings among the crew, inadequate boat and fire-prevention drills, drunkenness, death, and suspicion of murder. When the fire was discovered, 98 persons managed to get away safely in the boats. Of this number, 92 were crew members. There was, of course, a sensational trial. The radio operator (who, it was said, happened to be too busy to send out an SOS) developed into a hero. Is there a story behind all this? The author later states that the "hero" was, in some respects, not quite what he was supposed to be; in others, more so. We won't spoil the book for you by telling the details. Find out for yourself. Whew!

The United States Marines, a pictorial history by Lynn Montross, is almost as great a cliff hanger but set in an entirely different atmosphere. The book is just what the title says, a pictorial history of the USMC. In time, it ranges from the Marines' earliest beginnings at Tun Tavern to the present; in scope, it covers just about every action in which the Marines were engaged. To round out Montross' efforts, he has included a number of shots of Quantico, Eighth and Eye, and the center of the Marine Corps' being—Arlington Annex. Pictures are, of course, excellent and the text is terse and to the point.

To bring your pulse down to normal, you might try browsing through ***The World's Fighting Planes*** by William Green and Gerald Pollinger. This is a newly revised edition of a now-standard reference book on all military aircraft operated by the world's air forces today. It gives a comprehensive survey of the ultramodern warplanes capable of speeds twice that of sound; subsonic and transonic aircraft that have comprised the majority of the world's air forces for some years. In addition, it covers the older planes dating back to World War II; transport liaison and training aircraft, and helicopters. Each aircraft is represented with a photograph of the plane and three-view identification silhouettes; a brief history, flight specifications, and data on performance and armament.

Space Handbook, by Robert W. Buchheim and the Rand Corporation, is the last word on astronautics and its applications. It answers in non-technical terms the principal questions related to all fields of space operations. A must for future spacemen.

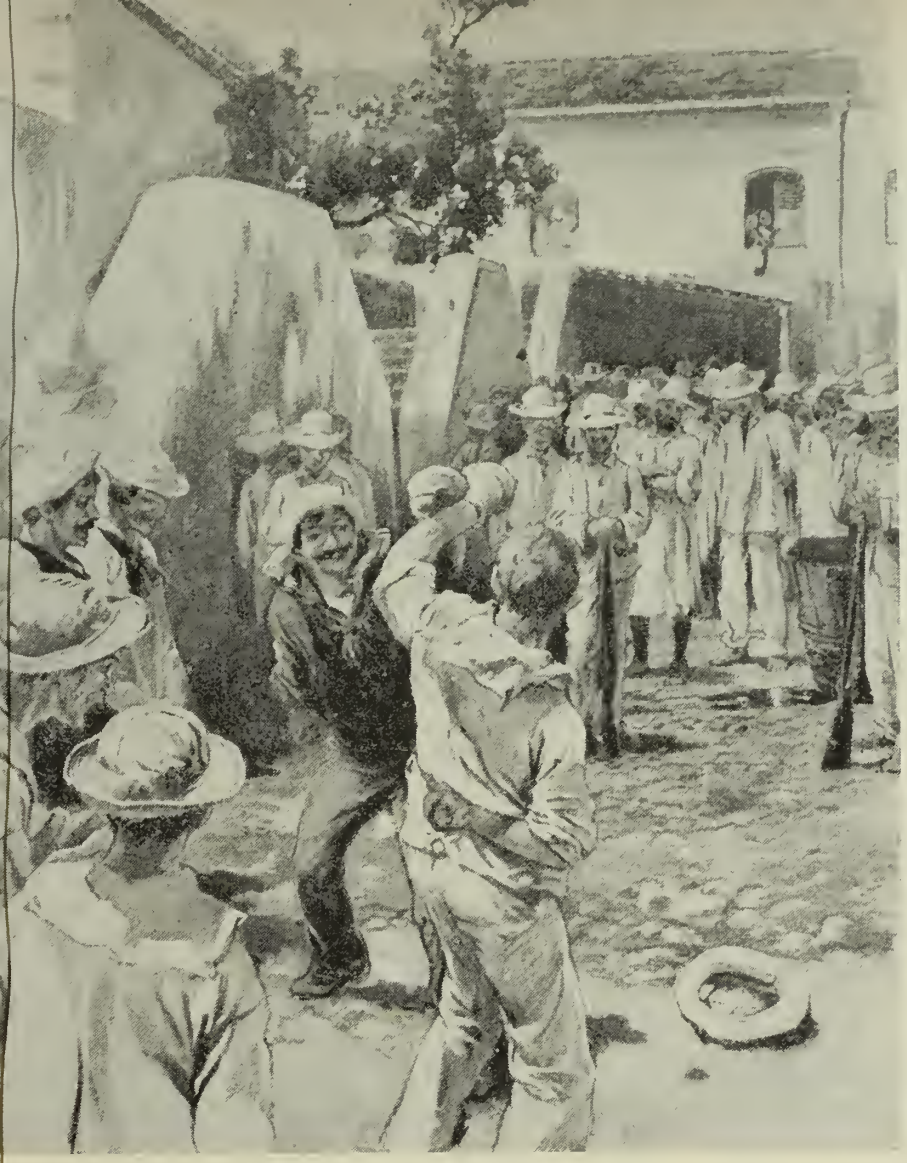
David J. Majchrzak, DN, USN



"How's the anchor watch?"

David J. Majchrzak, DN, USN

"LT, this isn't that kind of a northern expedition."



MEN OF SPIRIT

1898

High morale pays off for American Navymen taken as prisoners of war after dangerous mission.

The story has frequently been told of the sinking of the collier Merrimac *during the Spanish American War. However, the account of the imprisonment of LT Richmond P. Hobson,* USN, *and his crew after their capture may not be as familiar to our readers.*

The story here is that of Navymen maintaining morale under dismal conditions, adhering strictly to a code of conduct and handling themselves creditably as prisoners of war.

LT Hobson and his crew have sunk Merrimac *in an attempt to block the narrow entrance and channel and thus prevent Cervera's escape. They have been captured by the Spaniards, taken on board* Reina Mercedes *and are being transferred to Morro Castle when the narrative opens.*

WE CROSSED THE BRIDGE over the moat, passed the portcullis, and entered a vaulted passage, where an officer and guard were waiting. Captain Bustamante spoke to the officer, apparently the adjutant,—a thick-set man, low, heavy, with long black beard and dark eyes, apparently the man for the place. The men were conducted on through, and the jailer, with a ring of massive keys, led me to the left under an arched entrance into the guard-room. There were two chairs and a table.

The jailer was a remarkable man, probably six feet two, all bone and muscle, aquiline features, a face with a hard, set expression, that seemed never to have been disturbed by the passing of an emotion—the man to carry out orders to the letter, whatever their nature. We sat on in silence for a few minutes when Admiral Cervera entered, and we rose, and the jailer withdrew without a word.

The admiral advanced with outstretched hand and with an inquiry as to my welfare. I felt at home with him at once. He went on to say that he had received my note inclosing the report to commander-in-chief of the American forces. He had been particularly desirous to deliver it; but being a communication with the enemy, it was necessary to refer the matter to General Linares, who had refused to let the report be delivered. However,

From "Sinking of the *Merrimac*," by Richmond Pearson Hobson, Naval Constructor, USN, pp 580-604, 752-779, *Century Magazine*. February, March, 1899, Vol. 57.

LOOKING OUT—Except for the wreck of *Reina Mercedes* this is the view LT Hobson had from cell at Morro Castle.

a flag of truce would be taken out, and the American admiral would be informed of our escape and safety.

The conversation, carried on in French, then became more or less general, only one reference being made to *Merrimac*. The admiral asked about her size, but carefully avoided embarrasing questions. He spoke of American officers whom he had met, and inquired particularly about Admiral Luce, whom he had seen in Spain.

DURING my cruise as midshipman I had visited a number of ports in Spain; and later, while on duty in Paris, on a mission to the French shipyards, I had taken occasion, en route from Bordeaux to Toulon, to cross the Pyrenees into Spain. The Spanish admiral knew all the places I had visited and conversation continued in the pleasantest vein for probably ten minutes.

As the admiral left, the jailer reentered, and led the way out of the room through the pasageway to the rear, down a flight of steps, across a sort of court, then up another flight of stairs stopping before the door of the highest cell, which occupied the tip of the southwest angle of the castle. A sentry followed us.

The jailer threw open the door, and as we entered the barren and filthy cell, flies and insects started up. Then I perceived the word *Muerte* written on the wall.

The last prisoner must have died there, and evidently the cell had not been cleaned since. The jailer withdrew, leaving the sentry at the door.

An attendant brought in a box with four upright strips nailed at the corners for a table; but it would not stand so he leaned it against the wall, and left. The sentry closed the door, locking and bolting it.

This, then was my cell. I wondered where my men could be.

Soon after the captain left, directions for the door to be left open during the daytime were issued by the authorities. In a few minutes Charette was sent in. He had his usual cheerful look, unperturbed by the sight of the men's wretched cell and by the uncertainties of our confinement.

He referred to the heavy situation we had passed through, and said, "Every man would do it again tonight, sir."

INDEED, throughout the whole term of imprisonment the men showed the most remarkable spirit of cheerfulness. They never had the support of kind words and courteous visits, as I did; yet never once did they exhibit signs of anxiety or fear.

The Spanish soldiers at first taunted them as they would Cuban prisoners; called them desperadoes; accused them of fighting for money, making signs of dealing out coin; and passed their fingers across their throats. My men only smiled at such taunts, and they actually laughed at the gruesome mockings. It seems that the impression was more or less general, at first, that the men were not Americans, but a hired gang of desperadoes.

Several days later one of the officers spoke in a similar strain, whereupon I asked him what he meant. He replied: 'For instance, two of your men are deserters from the Spanish army, and that man Charette is a Catalonian from the northeastern part of Spain; one of your men is a Swede; another is a German."

I told him he was never more mistaken in his life—that the men were all American citizens, regularly enlisted and serving in the American Navy, and that, so far from it being necessary to get desperate men for the work, virtually the whole fleet had volunteered for it, and had pleaded to be allowed to go. This seemed impossible for him to understand.

A SOLDIER COMING IN at this time with a pan of frijoles, or beans, my thoughts came back to my surroundings. The frijoles were followed by a pan of rice and bread. The regular ration consisted of frijoles, rice, and bread, and except the bread, continued to be served in full quantity till the end of our captivity. As a rule, a piece of sausage came with the frijoles.

The cooking did not vary, both staples being invariably boiled without seasoning, and exactly the same food was served at every meal, until the system some-

what rebelled and after a while called strongly for variety. Yet on the whole the food was nourishing—it was clear that the authorities were giving me the same food issued to the Spanish officers.

My men received the same ration of frijoles, rice, and bread with a reduced ration of beef, while no beef at all was included in the ration of the Spanish soldier. Flour soon became scarce, and corn and a mixture of corn and rice were substituted. It was evident, however, that the Spaniards depended on bread more than we did and felt more keenly its scarcity; so it can be said that during the imprisonment the prisoners fared as well as their captors, if not better.

ONE AFTERNOON, while I was seated in my rocker just inside the door, gazing out over the fleet, an official with a stern look appeared.

He was followed by another august looking official, whose mouth seemed hermetically sealed; and who carried paper, pen, and ink, and he in turn by a third, who addressed me in English.

"That official," said he, pointing to the first—"that official is the *Juez de instruccion,* the judge of the instruction"; and he paused as if to see the effect of the announcement.

"This is the *secretario,* and I am the official interpreter."

"I am sure I am happy to meet you, gentlemen. Will you not be kind enough to take seats?" I replied, placing chairs to the front.

The secretary took his chair, set it alongside the table, and arranged his paper and ink without a word; and the judge and the interpreter finally taking chairs, we all sat down, and I waited for them to take the initiative.

The judge spoke to the interpreter, who, turning to me, said that the judge had come to examine me, and gave me fair warning to make my answers full and accurate.

I said that I did not doubt that the proceeding was entirely regular, but that I should be indebted if, before the questions began, he would be kind enough to explain to me under whose orders they came and what was the object and nature of the questions. He answered that they came under the orders of the commander of the port, and would question me as to the vessel that had come in on Friday morning.

I asked who the commander of the port was, and he replied that the commander of the port was the officer charged with all the affairs of the harbor, and that he received his authority from the captain-general, the captain-general receiving his authority from the government at Madrid.

I asked if Admiral Cervera, who had captured me, and the British consul, who was charged with the business of my government, knew of the proceeding.

THE JUDGE, who had shown signs of irritation, then burst out at me direct. He did not know whether Admiral Cervera and the British consul knew of the matter, and he did not care; he did not intend to have his authority questioned; he had come to ask questions, not to be questioned; he had never seen such a prisoner —and he rose to his feet in wrath.

I rose at the same time, and faced him, and told him he should have intelligence enough to know, and those who sent him should have intelligence enough to know, that the men who brought *Merrimac* in could not be intimidated or coerced into answering unauthorized or impertinent questions.

He said he would return and report that I refused to answer his questions.

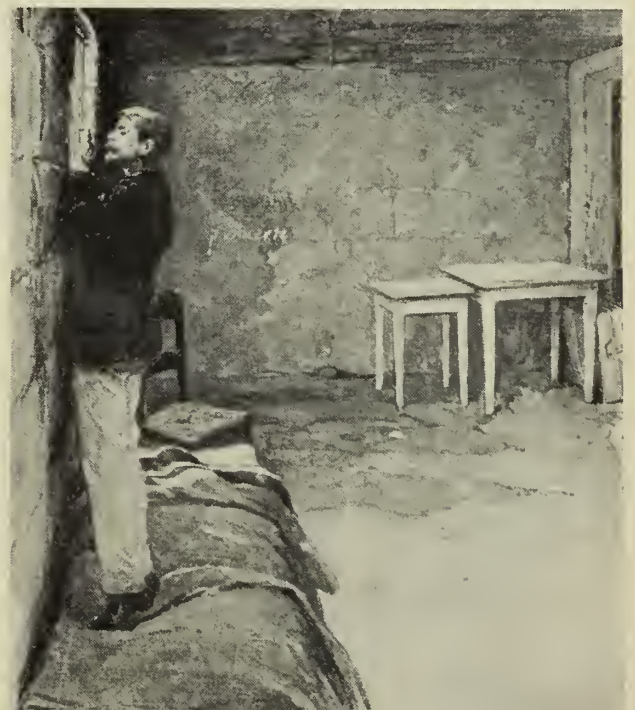
I replied that he did not seem to recognize that he had asked no questions. The defiance seemed to cool him off, and I suggested that he ask his questions, and I would tell him in each case whether I declined to answer or not; that I was sure it would give me pleasure to answer those that were proper.

HE CAME OVER and sat near the secretary, and began, the secretary copying the questions word for word, the interpreter translating word for word: "What is your name?" "What is your rank and occupation?" "Where were you born?" "Where have you lived?" "Are you single or married?" etc. I answered each question in turn, the interpreter translating my answers word for word, while the secretary wrote them down.

When the identification questions were over, the next question was as follows: "What was the object of the vessel coming into the harbor on Friday morning, the 3d of June, and under whose authority were you acting?"

I answered that the vessel came in under the authority of the commander-in-chief of the United States forces off Santiago de Cuba, and then asked for paper and pencil, and drafted the following additional answer: "Without in the slightest manner questioning the authority and the regularity of this interrogation, I must respectfully decline to answer in any way the first part of the question given until I have been informed by Admiral Cervera, by whose forces I was captured and also by the English consul, who has been named to transact the business of the United States in the city of Santiago de Cuba, that they have been informed of this interrogation and of the nature of the question itself"; and then I added the request that my men also be not subjected to questioning till after the receipt of such information. I superintended the translation into Spanish as the secretary took it down from the interpreter. While withholding the information, the answer would make it diffi-

SIDE-LINED—Lieutenant Hobson watches bombardment of Spaniards from his small cell window in the Castle.



PRISON VISIT—Admiral Cervera and Lt Hobson have a friendly talk in French in the Castle's guardroom.

cult for the judge to make out a case of defiance of any legitimate authority.

The judge, in the meanwhile, had entirely changed his attitude. He ceased asking questions, and began a pleasant conversation, saying that he lived under the same roof as the British consul, who was a capital fellow. He rose, and we walked up and down, conversing.

He said that he put aside his official capacity, and asked if I had any objection to telling him personally if the vessel had come in without a pilot.

I answered that it had. The difficulties of navigation seemed to strike him most. He had not seen the firing.

"Will you not shake hands, as man to man?" he asked; and I gave him a hearty clasp.

"I too am a naval officer," he added, "and have been detailed to this duty."

BY SUNRISE next morning (Tuesday June 7) we were off for Santiago. I found my men waiting in the entrance archway, and I formed them in column of twos and we marched out with military step, a guard of about thirty soldiers with us, under the command of a lieutenant, one third in front and the rest behind.

I had already decided which features of the harbor defense I would observe with special care as we passed; but upon arriving at the head of Estrella Cove, to my surprise and disappointment the leaders turned inland. It was evident that we were not to be taken up by boat through the harbor, as I had expected but were to tramp up by dirt road.

One can hardly imagine the exhilaration we felt. It is true that we had been in prison only four days, but it had been weeks since any of us had been ashore. The tropical vegetation had special interest. There were shrubs and trees that we had never seen before, and we picked flowers of rich color from the pathway to the amusement of our soldiers, who seemed themselves to have no interest in life, nature, or anything else. However they kept a keen eye on their prisoners.

I measured the chances of an attempt to break away. We had the advantage of greater vigor, and I felt we could make a dash and overpower and disarm an equal number, or perhaps the ten ahead; but twenty more behind, with bayonets and magazine guns, were too many.

I took careful note of the direction of the path, taking bearings by the sun, and examined the approaches on the right and left.

MY MEN HELD their heads up, marched with a fine sailor swing, obeyed orders with precision, and made an excellent appearance, well brought out by contrast with the guard soldiers. I felt proud of them, as indeed I did all through the imprisonment. I noted the critical looks of the Spanish officers and soldiers—looks that told the officers of the coming events.

After my early breakfast I asked the officer of the day to request permission for me to go with the attending surgeon to see my men in their quarters. The request was granted, with the understanding that communication would be allowed between myself and the men only when specially required.

I found them all together in one room of moderate size only, with a small barred opening in the door, which was kept closed, locked and bolted, and guarded by a sentry on the outside.

There was no other opening for light or air.

The men were cheerful, however, saying that the food was even better than at the Morro. I impressed upon them the absolute necessity of taking every precaution for cleanliness, and directed them to go through setting-up exercises twice a day.

They did this throughout, much to the amusement of the Spaniards, to whom the value of such exercise seemed never to have occurred.

EVEN WITH THESE precautions, I was not much surprised when, two days later, Phillips was taken ill and sent for me. He had stomach trouble, with low fever, and I wrote a letter to General Linares urgently requesting that amelioration be made—that if the men could not be given better quarters, they should be allowed at least an hour each day in the courtyard.

The British consul supported the request, and after three or four days' delay the order was issued allowing them to go out from twelve to one, the least desirable hour of the day, with a vertical sun; but this was better than continuous confinement. It was interesting to see them, as I had occasion to in crossing the yard, with a cordon of sentries all around on duty, yet admiring spectators. They made a great reputation for strength, the officers commenting on it.

But what seemed most interesting was the boxing, taken up later. The British consul found two boxing-gloves in town, and though they were both for the left hand, the men managed to get first-rate exercise and fun from them. It was amusing when the gloves came. I sent them out to the officer of the day to give to the men. He did not know what they were, and sent them to General Linares's office, where the British consul found them two or three days later; and it was only after assurances that the men would be less dangerous with the gloves on than without them that the general reluctantly consented to their use.

The same thing occurred in connection with reading matter. The consul, who was forbidden to send newspapers, sent in a good supply of old magazines, and a number of novels. Mr. Ramsden (the British Consul)

found them several days later on the desk of General Toral, and no amount of persuasion would bring him to let them go to the men.

"You can't tell me anything about such matters," he said. "I have been in prison, and tried it myself—marking certain words here and there which, combined, made up a message," He could find no words marked, but that made no difference.

REGARDING IT as very desirable that we should get back to the fleet with our knowledge of defenses at the entrance, I set to work upon the question of escape.

The system of sentries made escape look hopeless from the first. There was a sentry at my door looking at me all the time, a second at the entrance, and at night-time a second at the window.

When I had occasion to cross the courtyard, two and sometimes three sentries followed behind.

Nothing could be done in the way of excavation or filing the bars under the eyes of the special sentry.

My plan had to be reduced to one simply of perpetual vigilance, holding myself ready to seize any chance, keeping special lookout for the possibility of reaching a horse at the entrance, where horses were frequently hitched.

But I watched for a chance in vain. When our troops finally arrived in front of the city, the situation grew desperate, and I watched for even the faintest shadow of a chance. But no; the Spanish are past masters in guarding prisoners, and I was doomed to see the pieces of artillery make their locations known by hurling death at our troops.

IT WAS NOT LONG before the hope of an exchange also began to decline. At my repeated request the British consul brought the matter up with General Linares again and again; but each time the general replied that the matter would probably be decided in Madrid. I asked the consul to urge the matter upon the State Department at Washington, and he did so by a cipher cablegram to the British consul-general at Havana; but no reply came. Finally, on the 15th of June, I requested him to send another cablegram to the State Department, again urging the matter, to what was being done but not a word came in reply.

Reason argued that everything would certainly be done, that the authorities must appreciate that I had valuable information, but the human feeling would rise, "Why can't they tell us if they are doing anything?"

Day after day still passed and not a word came. In spite of reason, a bitterness began to set in—a kind of deep-seated resentment: "It is not right for our countrymen to forsake and forget us in this way."

Little did we suspect what a kindly interest they were really taking. On the 18th the British consul came to

UP THE HILL—Captain, crew of *Merrimac* are marched under guard to their prison quarters in Morro Castle.

say that Paris despatches stated that the Spanish government declined to exchange for the prisoners taken on *Augonauta*. This at least gave the satisfaction of knowing that efforts had been made. However, the despatches stated that the Spanish premier, Sagasta, had refused entirely to make the exchange on account of the information that the prisoners must have gathered.

The British consul gave this gloomy news in the afternoon; but that morning I had heard firing down the coast, and I knew it meant the debarkation of our troops, and felt that a new phase was close at hand.

In comparison with the calculated pressures practiced by the communists in Korea, LT Hobson would appear to have led an ideal existence. Nevertheless, existence as a prisoner of war under any circumstances can be terrifying and lonely.

In lieu of any formal guide as now exists, LT Hobson chose the only proper course of conduct. In spite of the warm friendship and mutual respect which developed between captors and captive, he remained a military man —alert to seize an opportunity to escape, to observe enemy dispositions, to protect and assist his men.

Today, the path is more clear. The Code of Conduct, quoted in part below, provides a guide for all military personnel:

- *If I am captured I will continue to resist by all means available. I will make every effort to escape and aid others to escape. I will accept neither parole nor special favors from the enemy.*
- *When questioned, should I become a prisoner of war, I am bound to give only name, rank, service number and date of birth. I will evade answering further questions to the utmost of my ability. I will make no oral or written statements disloyal to my country and its allies or harmful to their cause.*

MEN OF *MERRIMAC*—*Left to Rt:* R. Clausen, O. W. Deignan, G. F. Phillips, D. Montague, G. Charette and F. Kelly.

TAFFRAIL TALK

BOTH THE NAVY and the country suffered a loss in the death of Fleet Admiral William F. Halsey. He has been described in terms ranging from "legendary" to "salty"—and from "daring and inspiring leader" to "rugged old seadog."

Admiral Halsey was tagged with the name "Bull," although he preferred to be called Bill by his friends. He was a controversial man; always in the thick of battle, large or small. All reports agree: He had moral and physical courage.

The name Halsey will go down in the history books as that of a man who rose up with inspired leadership in a dark time of our nation's life. He fought his men, planes and ships as would a skilled boxer, with attack after attack, always unpredictable, always keeping the enemy off balance.

There are some who will not agree with all he did. This, however, is sure: He was a fighter. He commanded mighty naval forces. He fought his war the way he saw best.

★ ★ ★

Patrol, SubPac's newspaper reports an interesting coincidence during the visit of a six-ship squadron of Japanese patrol frigates to our 50th state recently. One of the Japanese ships berthed alongside uss *Tunny* SS(G) 282 was JDS Nara. Her hull number is also 282.

Mathematicians on board *Tunny* (and, of course, all submariners are mathematicians) estimated that the odds of such an occurrence were more than a million to one. To mark the occasion, gifts were exchanged between the ships.

★ ★ ★

We are pleased to note that scrimshaw is apparently making a come-back. We have become interested in this type of work that can be done in spare time, using very little equipment. Many Navymen have fallen for its fascination. Furthermore, the medical people who are watching the beginnings of the Space Navy and the nuclear underseas Navy tell us that it's a wonderful outlet for tension and appeals to the man doing precise or detailed work.

Yet it's simple, as well as fascinating. If you can tie a bowline, or scrape paint down to the bare metal, you can do scrimshaw. You don't have to be an expert latheman, or opticalman or tradevman or instrument repair man. You might find that once you learn a few of the techniques, you'll stand a good chance of becoming a better carver than the men who deal with creating in their daily work.

Scrimshaw work goes back as far as there is a written record, and probably existed before writing.

Sailors developed scrimshaw, i.e., carving, to a high art. No expensive equipment was needed. Even a sharpened nail could scratch out a design, could engrave, incise, carve. And the knife was, and is, the number one tool.

To the old time sailor, scrimshaw could be a way of life. Above all, the art of scrimshaw was a satisfying method of using a seaman's knife to create a work of beauty.

It still is. Try it.

The All Hands Staff

The United States Navy

Guardian of our Country

The United States Navy is responsible for maintaining control of the sea and is a ready force on watch at home and overseas, capable of strong action to preserve the peace or of instant offensive action to win in war.

It is upon the maintenance of this control that our country's glorious future depends. The United States Navy exists to make it so.

We Serve with Honor

Tradition, valor and victory are the Navy's heritage from the past. To these may be added dedication, discipline and vigilance as the watchwords of the present and future. At home or on distant stations, we serve with pride, confident in the respect of our country, our shipmates, and our families. Our responsibilities sober us; our adversities strengthen us.

Service to God and Country is our special privilege. We serve with honor.

The Future of the Navy

The Navy will always employ new weapons, new techniques and greater power to protect and defend the United States on the sea, under the sea, and in the air.

Now and in the future, control of the sea gives the United States her greatest advantage for the maintenance of peace and for victory in war. Mobility, surprise, dispersal and offensive power are the keynotes of the new Navy. The roots of the Navy lie in a strong belief in the future, in continued dedication to our tasks, and in reflection on our heritage from the past. Never have our opportunities and our responsibilities been greater.

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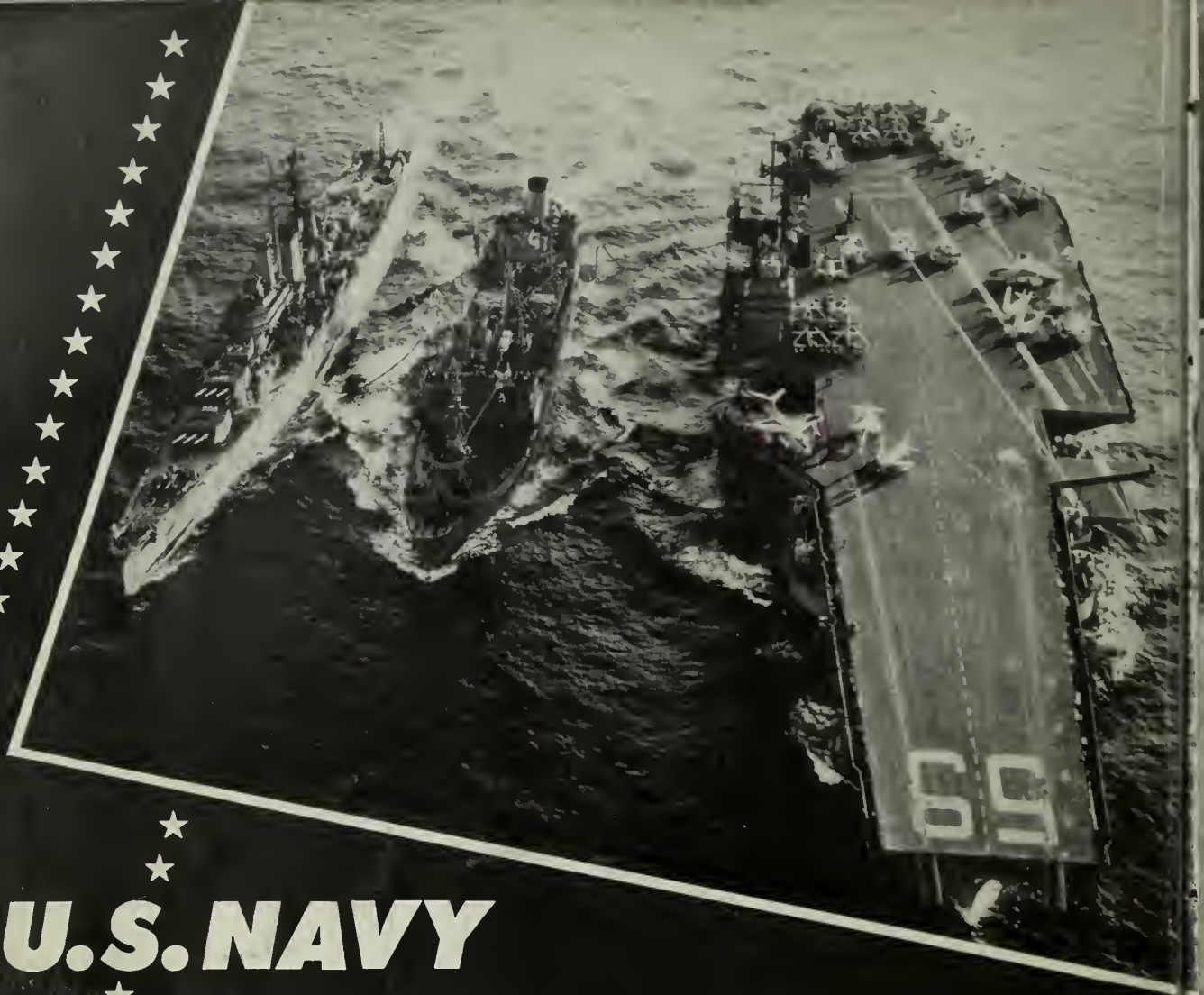
• AT RIGHT: PASSING OVER — Viewed from on high, attack aircraft carrier USS *Intrepid* (CVA 11) makes a pretty picture as she cuts her way through the sea.



U.S. NAVY
GLOBAL PEACE THROUGH MOBILE SEAPOWER

ALL HANDS

NOVEMBER 1959

ALL HANDS

THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN

NOVEMBER 1959 Nav-Pers-O NUMBER 514

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• AT LEFT: NECK AND NECK—Frisky high-jumping porpoise seems to be having a ball as it races through the water alongside USS *William M. Wood* (DD 715). Sharp-eyed photographer napped photo from USS Canberra (CAG 2) in the Med.

• FRONT COVER: SECOND *Polaris*-firing, atomic-powered sub, USS *Patrick Henry*, SSB(N) 599, slides into the water. *Patrick Henry* can fire *Polaris* while remaining submerged. The sleek sub is scheduled to join the Fleet next year.

• CREDITS: All photographs published in ALL HANDS are official Department of Defense Photos unless otherwise designated.

MOVING DAY FOR

LET'S SEE NOW. All the packing's done. Tires, battery and radiator on the car all okay. The neighbors have agreed to take care of Fido. Notes for the milkman and the paperboy. Did anyone turn off the gas?

Most of us, at one time or another, have sweated through a similar check-list while preparing for a business or vacation trip. We've all learned that advance planning plays a big part in making such a jaunt a success.

Just multiply such details by about a million and one, decrease the allowable margin for error by at least that much, and you get some idea of the effort involved in getting a U. S. Navy ship ready for an overseas assignment.

Obviously the Navy doesn't just pick a ship at random and order her to get underway the next day to relieve USS *Umpty-ump* half-way around the world.

The bulk of our naval forces are, in general, arrayed in three different stages of operation. The largest numbers are operating in the forward areas, with the Sixth Fleet in the Mediterranean and the Seventh Fleet in the Far East; another group is on the east coast, while the third is serving on the west coast. Some are undergoing repair and refurbishment, either a major shipyard overhaul or, where less extensive repairs are required, in a yard or tender availability period.

Others, having completed their overhaul, are in various stages of their training cycle, readying themselves for their next deployment to the forward areas.

It's the over-all responsibility of the Atlantic and Pacific Fleet commanders to insure that—brush fires, crises, or what-have-you notwithstanding — this cycle continues to supply fresh, fit ships and crews to our overseas Fleet commands.

LET'S TAKE THE CASE of the attack carrier USS *Saratoga* (CVA 60) to illustrate what we mean. *Saratoga's* experience in preparing for her current cruise with the Sixth Fleet is typical on a large scale of those of most ships readying for similar tours to any part of the globe.

Commander Naval Air Atlantic's operating schedule, as approved by CINCLANTFLT, called for *Sara* to relieve USS *Franklin D. Roosevelt* (CVA 42) in August, 1959.

Sara had returned to her home port, Mayport, Fla., last fall after being relieved as Task Force 60 flagship by USS *Forrestal* (CVA 59). During an eight-month deployment with the Sixth Fleet she had steamed more than 55,000 miles and logged some 12,000 carrier landings. Operating schedules had kept her on the go almost around the clock, and wear and tear on equipment, aircraft and the ship itself had been extensive.

First order of business, then, in preparing *Sara* for her 1959 commitment, was a four-month overhaul period at the U. S. Naval Shipyard, Norfolk, Va.

All of the repair and renovation work requests and job orders that had been piling up for months were broken out and turned over to the Yard craftsmen who would set to work to make the large carrier good as new again.

Sara left the shipyard in March, and spent about two weeks conducting a post-overhaul shakedown. This included sea trials designed to test all equipment thoroughly, and make

absolutely sure that *Sara* was in tip-top operating condition. All the repair work that had been accomplished was checked out.

NEXT ITEM on the agenda was a grueling refresher training period at Guantanamo Bay, Cuba. *Sara* spent more than three weeks in intensive training under the wing of the Fleet Training Group. Both the ship and her crew were literally put through the wringer by the FTG.

Almost one-fourth of *Sara's* crew were new men, having reported aboard during the turnover in personnel normally experienced while a ship is in overhaul. These men had to be taught their new jobs, and taught them well. So far as the veteran hands were concerned, old skills grown rusty with disuse had to be dusted off, practiced and repracticed, until the entire crew had been whipped into a smoothly functioning team.

Underway battle problems were constantly thrown at *Sara* and her men, simulating almost every situation a ship could encounter. She was hit by torpedoes, shells, missiles, atomic fallout and gas, and there was a mock collision or two thrown in for good measure. She was attacked from the air, from the surface and from undersea. Engines failed and electrical systems went out. Key officers and petty officers were theoretically put out of action, and subordinates were required to take over. There were endless drills.

While all this was going on, the Simon Legrees from the FTG were peering over shoulders and constantly checking stop-watches. From their observations and notes came *Sara's* final grading as to her capability of performing a warship's two main functions — fighting and defending herself.

WHILE MOST OF THE BATTLE problems, as mentioned earlier, had been merely simulated, this refresher training was taken very seriously both by *Sara's* crew and by the FTG team. Although the up-coming Med cruise was to be a peacetime one, every man aboard knew that in these troubled times anything could happen, and that it was vitally important to be prepared.

WARM UP—Although previously air squadrons might have served on the same carrier, turn-over while at home fields makes pilot training necessary.

(If anyone had been inclined to take things too lightly, he had only to hearken back to the example of *Sara's* last Med tour to point up the need for readiness. *Sara* had been riding at anchor in a Spanish port in the late summer of 1958 when the Lebanon crisis erupted. Within 12 hours her aircraft were flying close air support to the Marine landings in that country. Planes were shot at with real bullets, too.)

Pronounced fit and ready by the FTG, *Sara* returned to Mayport for replenishment and a well deserved rest. Then came more daily underway training, and preparation for participation in Fleet exercises.

Sara's stint in Gitmo had turned her into a sharp ship. Now the em-

SUPER MARKET—To feed 2500-man crew, a 90-day supply of dry stores, as well as fresh and frozen food for 30 days, has to be loaded before leaving.

phasis would shift to concentration on becoming a member of a team.

Fleet exercises — all kinds and sizes — are constantly being conducted. Most of them serve as a sort of graduation exercise for ships slated to join the forward operating forces.

They may be air defense, strike, antisubmarine or other types of exercises, but essentially they are all aimed at the same objective—instructing our various naval units and those of our NATO allies in the techniques and value of teamwork.

SARA WAS INVOLVED in two of these exercises before her departure. She spent some 10 days late in May in joint maneuvers called INTEX 1-59. Later, from mid-June till late July, she joined LANTFLEX 2-59, an exercise involving most of the different types of drills and maneuvers which had been in progress off the east coast since late spring.

Sara returned once again to Mayport late in July. She had less than two weeks to make final preparations for departure. There was still much to be done—loading stores, fuel and ammunition, and, of course, final embarkation of her air group.

Air Group Three, which was to supply *Sara's* aerial punch in the Med, was no stranger to her deck.

Navy policy now is to assign an air group to a specific carrier wherever possible. In line with that policy, Air Group Three was making a second successive forward deployment on board *Sara*.

Five squadrons, detachments of three other squadrons and a helicopter make up the Air Group. In all they fly more than 70 planes.

Included are Fighter Squadrons 31 and 32, Attack Squadrons 34 and 35, and Detachment 43 of Photographic Squadron 62, all from NAS Cecil Field, Jacksonville, Fla.; Detachment 43 of Carrier Airborne Early Warning Squadron 12 and Detachment 43 of All Weather Attack Squadron 33, both from NAS Quonset Point, R. I.; Heavy Attack Squadron 9 from NAS Sanford, Fla., and an HUP from Helicopter Utility Squadron Two, NAS Lakehurst, N. J.

THESE SQUADRONS had returned to their home fields after leaving *Sara* last fall. Since that time they had been busily training new pilots. The turnover was terrific—nearly half of the pilots making this year's tour were new to their squadrons—and a large percentage of them had no previous carrier duty.

The entire air group was aboard for the trip to Gitmo—in fact, a very important part of the training there was concerned with carrier qualification work for the pilots. They were also aboard during *Sara's* participation in the Fleet exercises, practicing the kind of missions they would perform as a part of the Sixth Fleet.

Nearly 1000 men, including pilots, air crews and supporting elements, are attached to Air Group Three.

Much of the intensive planning for *Sara's* return to the Med was concerned with the ever knotty problem of personnel. An overhaul period always causes a major turnover in a crew. Some leave for discharge from the service, others are transferred to other duty. A large number of men do not have the necessary obligated service time remaining to make the next cruise. Some of these will ship over, and some will extend their enlistments in order to make the trip, but many do not. It was up to the personnel officer and his staff to come up with replacements.

A large percentage of the losses had been first enlistees—non-rated and lower rated men leaving the Navy after one hitch. Most of their replacements would be men fresh out of recruit training or service schools. It was important to get these pea-green sailors aboard as far in advance of the cruise as possible, so that their on-the-job training could begin.

Other *Saratoga* crew members scattered far and wide across the country to attend various service

DESTINATION—*USS Saratoga* (CVA 60), shown at Piraeus, Greece, takes her place with ships of the Sixth Fleet.

schools. Some were men who had come to the ship months earlier direct from recruit training, and through hard work and study had demonstrated aptness in a certain specialty. Now they were being sent to a Class A school under the Fleet quota. They would return to *Sara* as designated strikers in their ratings, armed with more knowledge of the tools of their trade, and ready to move up the petty officer ladder.

Others were veteran petty officers sent to Class B and C advanced courses to increase their skills and fit them for jobs of more importance and responsibility.

TAKE Doakes, ET1, for example. He was a fine technician, but he had no previous training in the operation and maintenance of CCA (carrier controlled approach) gear. Door, ET1, who had filled that billet for the past three years, had gone to shore duty. Doakes was sent to the Naval Technical Training Unit, Olathe, Kans., for an 18-week course of instruction in CCA maintenance. When he returned to the ship he would be well equipped to step into Door's shoes.

In a crew of more than 2500 officers and men the manpower situation can be a headache to the personnel office. There were only two facts, actually, that *Sara's* personnel officer could feel entirely sure of.

One, of course, was that when *Sara* departed for the Med she would have the best and the biggest crew aboard he could give her.

The other was that something was almost sure to happen at the last moment to upset a part of his plans. Far too late, probably, to be able to do much about it, a key CPO in the CIC would be taken seriously ill and transferred to a naval hospital on the beach. Or, the assistant communications officer would suddenly get his orders to nuclear power school, and a young, inexperienced ensign would be sent as his relief.

All of these things can and do happen, but, while threatening to grow gray in the process, *Sara's* personnel officer managed to solve most of his problems by sailing time.

WITH THE MONTHS of training and exercises behind them, *Sara's* crew pitched in to the task of provisioning the ship.

Cranes and working parties were moving at top speed as thousands upon thousands of crates, boxes, barrels, bales and cartons of all sizes and descriptions were hoisted aboard and packed away in the vast compartments below.

ON DUTY—When a ship finally leaves to join the Fleet she is shipshape and her crew members are ready to handle any emergency that might arise.

There were spare parts, for both the ship and her aircraft. There were dry stores—a 90-day supply of them. At the last possible moment the frozen and fresh foods would go aboard, enough to last the carriermen for 30 days.

At the fuel dock all of *Sara's* giant tanks were topped off—diesel fuel and oil for *Sara;* avgas, oil and jet fuel for the planes.

The disbursing officer took care of a highly important item—stowing money, and lots of it, in his big vault. There was plenty of that good Med liberty ahead, and the men would be looking forward to paydays.

Then came the hard part—saying goodbye.

Tough, you bet it's tough, no matter if it's the first or only the latest in a long series of partings for a wife and her sailor husband. She fights against it, but the tears are very near the surface, and some spill over. It's not all one-sided either—more than one Navyman works on a lump too big to be swallowed.

There are hugs and squeezes for the kids, and the fond admonitions, "Be good, now, and make sure you mind Mommy." The smaller ones show wide-eyed uncomprehension of the situation, "How come you're going away Dad?"

Tough—you bet it's tough.

For the single men, too, there are many old friends to be told, "So long, for a while," and one last visit to some favorite liberty spot.

THEN, PRACTICALLY at the last minute, the unexpected cropped up. The best laid plans, as the poet says, gang aft agley, and this was one of those times. One of *Sara's* shafts wasn't running true, and a visit to a shipyard for emergency repairs was indicated.

Far away in the Med, the men of *FDR*, anxious to get home, gnashed their teeth at the news. There was no help for it though, so lines were cast off, and *Sara* steamed up the east coast and into New York Naval Shipyard.

There was a shift in plans for the Air Group too. Instead of embarking in Florida, they were ordered to fly to Norfolk, where *Sara* would pick them up after her repair work was completed.

It was from Norfolk, then, that *Sara* departed in mid-August, setting a course for Gibraltar and a rendezvous with *FDR*.

It had been simple, really. None of the headaches, none of the sweat, toil and tears of the previous months, was revealed in the Navy communique marking the event.

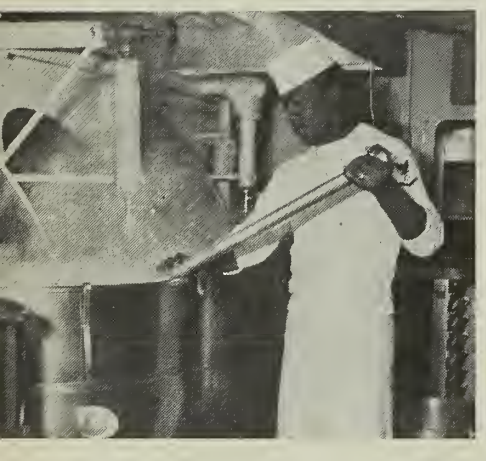
"A number of routine shifts in our Sixth Fleet operating forces were made today," it read.

—Jerry McConnell, JO1, USN.

From Soup to Nuts

STEAKS are made in *Sara's* galley.

MEAT BALLS are made for spaghetti dinner. *Below:* Noon soup is brewed.



NAPOLEON is generally credited with making the statement that an army travels on its stomach. He might have added that Navymen sail on theirs.

To give an example, the amount of foodstuffs consumed daily aboard the attack aircraft carrier USS *Saratoga* (CVA 60)—see page 2—would be enough to supply the customers of the average corner supermarket.

All of this good food would be useless without the cooks, bakers and meat cutters that prepare it for the crew. *Sara's* S-2 Division is composed of 73 cooks, bakers and butchers and their trained assistants. In addition, its ranks are swelled by more than 120 messmen coming from the various divisions of the attack carrier.

In a mobile, floating air station as large as *Saratoga*, the actual food consumption figures per day of the 4000-man crew can only be appreciated by an itemized breakdown. This would include: 1100 loaves of bread; 9400 pounds of vegetables, 1000 pounds of dairy products; 4600 pounds (over two tons) of meat; 4000 pounds of potatoes; and 12,000 pounds of assorted dry provisions (such as cereals and flour).

During *Saratoga's* last eight-month deployment with the Sixth Fleet in the Med almost eight million pounds of food provisions were prepared for the consumption of the ship's crew. (That's an accurate figure!)

Besides preparing the food, there's the problem of serving it in as attractive a manner as possible.

For example, just to cook 4000 steaks and let them stand isn't exactly as appetizing a situation as one might desire. Thus, certain foods must be prepared as needed for immediate consumption. Generally, however, food is prepared in large quantities—without sacrificing taste.

Hundreds of pounds of steak for a noon meal; 400 lemon meringue pies; a thousand quarts of milk: these figures, when added together, begin to form the gigantic image of what it takes to feed the crew of a modern warship.

The preparation of salads alone is a full-time job for a number of men. Aside from merely looking and tasting good, the food used must be properly selected in order to compose a well balanced diet—one that will keep the men as physically fit as possible. Needless to say, the taste of individuals differ, and the food is therefore prepared in such a manner as to please the greatest number possible. Admittedly, eating aboard *Saratoga*, or any other combatant ship for that matter, is not like dining in a plush restaurant ashore, but neither is the attack carrier a luxury liner.

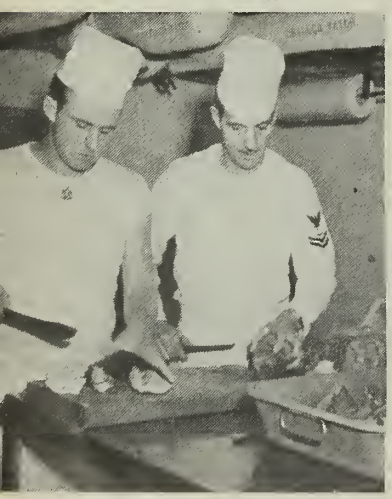
Saratoga has four mess halls, two galleys, two bake shops and two meat-cutting shops. It is in these places that the men of S-2 division apply their trades. If some of the figures quoted above seem rather staggering and a little difficult to believe, then toss these around too: During a normal operating day at sea approximately 12,000 full meals are served aboard *Saratoga*. In addition there are countless box lunches prepared for pilots and flight crews, and the popular night rations for the night owls or watchstanders.

Speaking of working hours, you may wonder when all this food is prepared. While most people are still in the rack, the cooks and bakers begin their daily chores. The preparation of meals begins about 0400 each day—about two hours before the crew begins eating breakfast.

Gone are the days of salt pork and sea biscuits. Today's Navy calls for a balanced diet of well prepared food. And that is just what the S-2 Division aboard *Saratoga* is famous for. They not only prepare food in quantity but stress quality as well.

—M. Z. Passman, SN, USN.

TASTY MESS—Men of S-2 Division of *Saratoga* have big job preparing food.



Come and Get It!

THE MEN OF USS *Los Angeles* (CA 135) have some pretty good reasons for thinking their general mess is one of the best in the Pacific. Among those reasons are such treats as steak for breakfast, broiled lobster, pizza, birthday dinners every week, hamburger snacks after the evening movies and occasional barbecues on the ship's fantail. In addition, between-meal snacks of sandwiches, cookies, ice cream, milk and coffee add up to good living.

As L. R. Long, CSC, says, "Menus are a big improvement now. You used to be able to tell what day it was by what you were eating. During World War II Wednesdays and Fridays were always bean days, and Sunday was always chicken day. Eggs were served about twice a week for breakfast. Milk was almost unheard of, and Navy cookbooks were about one-fifth present size."

Chief Long's formula for success is simple. "The general mess must try to satisfy the tastes of the men. When they throw food away, they don't like it. So, when we see too much of one item thrown out, we don't serve it so often."

The favorite dishes in *Los Angeles* are steak, hamburgers, chili dogs, lobster and Navy beans. According to Chief Warrant Officer W. W. Wright, USN, who heads the Commissary Department, the crew can eat 200 pounds of beans per day. On Friday, *Los Angeles* serves five varieties of seafood, plus meat.

It takes a lot of work to prepare meals the way *Los Angeles* does.

At 0345 the duty commissarymen are awakened. Fifteen minutes later they are in the galley, lighting off the ranges and ovens and starting to prepare breakfast. All their provisions are laid out the night before.

At 0430 the mess cooks—"front room people"—are up, and after they set up the utensils, salts and peppers and trays, they are fed. The crew's mess line forms at 0600, and the crew is fed breakfast until 0730.

While the crew is having breakfast, the commissarymen are already preparing lunch.

At 1100 the mess cooks are fed again. Half an hour later the crew's mess line moves through. The noon meal is served until 1230.

At 1600 the mess cooks are fed dinner, and again, half an hour later, the crew's mess line starts moving through. After dinner, hamburgers are prepared—so that the crew won't have to go hungry after the evening movies.

Naturally, all this makes a very favorable impression on the crew, some of whom call *Los Angeles* "the Waldorf of the Pacific."

It is even claimed that this conversation actually took place between two *Los Angeles* Navymen when they heard "Payday" piped over the 1 MC.

"That's the second-best call in the Navy," said the first man.

"What's the best—liberty call?" asked the other.

"Nope," said the first, "Mess call."

A ship just has to be a good feeder to rate that unsolicited testimonial.

IN ACTION—Cooks apply the art of their trade in cruiser's galley.

GOOD FEEDER—Satisfied customers get both quantity and quality when they go through chow line of "LA."

MESS MEN—Crew behind cruiser's meals pose for picture. *Right:* Chow time.

Riding on a Torpedo

NOT AN UNUSUAL SIGHT off the coast of Hawaii almost every day of the week is the Navy at work, boning up on its antisubmarine warfare techniques. An unusual Naval vessel on the scene, however, is an orange and grey 63-foot boat—and you wonder where it fits into this seriously complex phase of modern warfare.

In the air, buzzing helicopters flit to and fro, pausing here and there to drop a sonar buoy beneath the water to listen for a possible submarine.

Under the ocean's surface is a submarine. Representing an enemy, it slips silently into position to torpedo a surface ship.

On the surface a destroyer speeds by, its sonar reaching down into the depths in search of the elusive prey.

When either ship gets a direct bearing on the other, its commanding officer may order the attack.

Aboard the sub the order "Fire torpedo number one!" is followed by a loud "swoosh" as hydraulically compressed air shoots a torpedo from its tube.

On the destroyer a mechanical arm flips a metal fish over the side quicker than you can repeat the phrase, "Damn the torpedoes, full speed ahead!"

Whether it's the sub or the destroyer that fires a torpedo, it's a costly business.

The torpedo, an extremely intricate weapon of naval warfare, costs upwards of $10,000.

The Navy, to offset the loss of these expensive mechanical marvels, has placed the 63-foot boat on the scene of its local antisubmarine operations.

Its job is to retrieve torpedoes fired in practice so that they may be used over and over again.

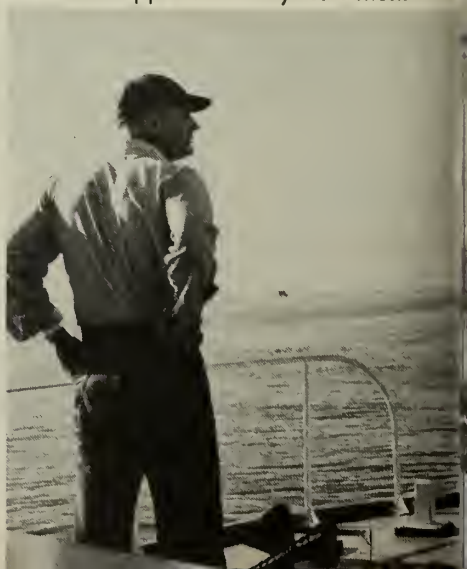
It is estimated that the three torpedo retriever boats assigned to Pearl Harbor saved the U.S. taxpayer at least four million dollars in the past year alone by retrieving more than 300 torpedoes.

The retriever boats are under the operational control of Commander Submarine Group, Pearl Harbor. Originally constructed as crash boats, they were converted into retrievers by the Navy. They are now equipped with heavy-duty winches and a special sea ramp in their after end to permit the recovery of torpedoes at sea.

At Pearl Harbor 20 men are as-

'TIN FISHING'—Torpedo is launched (above) and retrieving winch is checked.

READY—Skipper stands by for action.



Retriever

signed to look after the boats and conduct torpedo recovery operations in the waters off Hawaii.

"A typical day for a retriever and her crew of four starts about six in the morning and ends around six in the evening," says Paul R. Danner. Danner, a boatswain's mate first class, often skippers one of the retrievers. Accompanying him on a day's patrol are an engineer and two deckhands.

Throughout the day the crew is kept abreast of developments by radio communications. Following a torpedo firing they swing into action. To aid them in locating torpedoes, packages of dye are attached to the torpedo's hull. This dye dissolves quickly on contact with water and acts as a valuable marker during recovery operations.

After a grueling 10- to 12-hour day at sea the boat and crew return to Pearl Harbor to off-load their day's catch.

How do the men like their job?

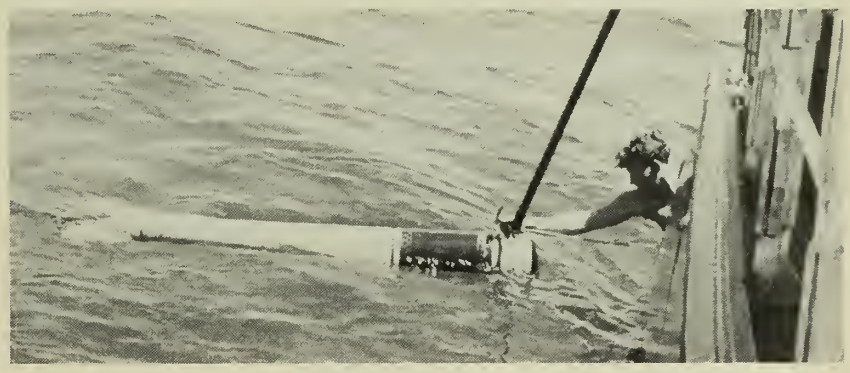
"We all feel that what we're doing is an important thing," says boatswain's mate Danner.

"Once in a while," adds Danner, "the crew finds that the days get long and tiring. When this happens we take along our fishing gear—a rod and reel, that is. Several times some of our boys have brought back some whopping big fish—not only metal ones—but those that would do credit to any man's den."

—Story by W. L. Leslie, JO1, USN
—Photos by:
Harold Wise, PHC, USN
and Earl Millham, PH3, USN

THIS TORPEDO will be used again.

TRACK DOWN—Torpedo retriever boat goes after a 'fish' in an ASW drill.



ALL ABOARD—Torpedo is hooked (above) and pulled up ramp at after end.

Face-Lifting for a

WHEN A SHIP comes out of conversion, the news usually rates a line or two—or maybe a couple of paragraphs—in the newspapers. But to the crew members who have been sailing in that ship, the conversion means a lot—in fighting capabilities, power, safety, habitability and comfort.

Take uss *Oriskany* (CVA 34) for example, now back in full operation after leaving her drydock renovation parlor. From crew members of *Oriskany*, we heard this story:

It took two years, two months and 53 million dollars to convert *Oriskany* from a World War II flattop into a modern attack aircraft carrier. The conversion was done to enable her to operate heavier and faster aircraft more safely and efficiently.

To appreciate many of the changes, you'd have to be a pilot. As you wait on one of the steam catapults, open the throttle of your plane, and give the go-ahead salute, you can feel confident of a safer launching than possible with the old hydraulic catapults. And instead of the swift kick-in-the-pants treatment the old system gave, you receive a steadily accelerating ride off the bow.

Even as a pilot approaches the carrier for landing, he notes several improvements. Flying into the groove—the approach path—he will see his reflection in one of the new landing mirrors. The mirrors do little for a pilot's vanity, for the concave mirror focuses his image into an unflattering meatball. When he gets his image centered with respect to lights surrounding the mirror, he can expect to land on the dry, aluminum-alloy-plated landing strip of the flight deck.

About this time over the noise of his engine he can hear the "whump" of his plane as it touches down on the carrier's new, 520-foot angled flight deck.

If it's a good "whump" he feels a rude but healthy pull as the tail hook on his plane engages one of the five newer, tougher and "pullier" arresting wires—and he is home. If he goes sailing down the deck without feeling this pull it has definitely been a bad "whump."

But all is not lost—thanks to that angled deck. As he approaches the deck's end, he can be thankful that he isn't on the old straight flight deck heading for parked aircraft, good friends and newspaper headlines. He grabs the throttle—so doing, he hears a "Rroarr" and knows he is on his way around for another try at the wires.

One of the most noticeable changes in the ship is its streamlined bow. The old carrier bows were open, much the same as the fantail is today. This meant that when the ship plunged into a heavy sea, salt water came rolling down the hangar decks pouring into hatches, carrying with it various forms of sea animals. The new bow provides a closed forecastle, a greater seaworthiness, increased support for the flight deck—and fewer soakings.

Oriskany's main battery is her planes. In addition, she has a wide range of ordnance and conventional bombs. Her planes will carry two

BEFORE CONVERSION *USS Oriskany* (CVA 34) looked like this. Her straight deck could not handle latest jets.

Flattop

kinds of air-to-air missiles—the *Sparrow* and the *Sidewinder*—and one air-to-surface missile—the *Bullpup*. *Oriskany* can also claim that she has nuclear weapons capability, including a new nuclear depth charge which can be dropped from the air.

Since *Oriskany* came out of conversion, many old salts have been attracted by the additions on the bridge. One new fangled contraption they can puzzle over is the ship's automatic steering system.

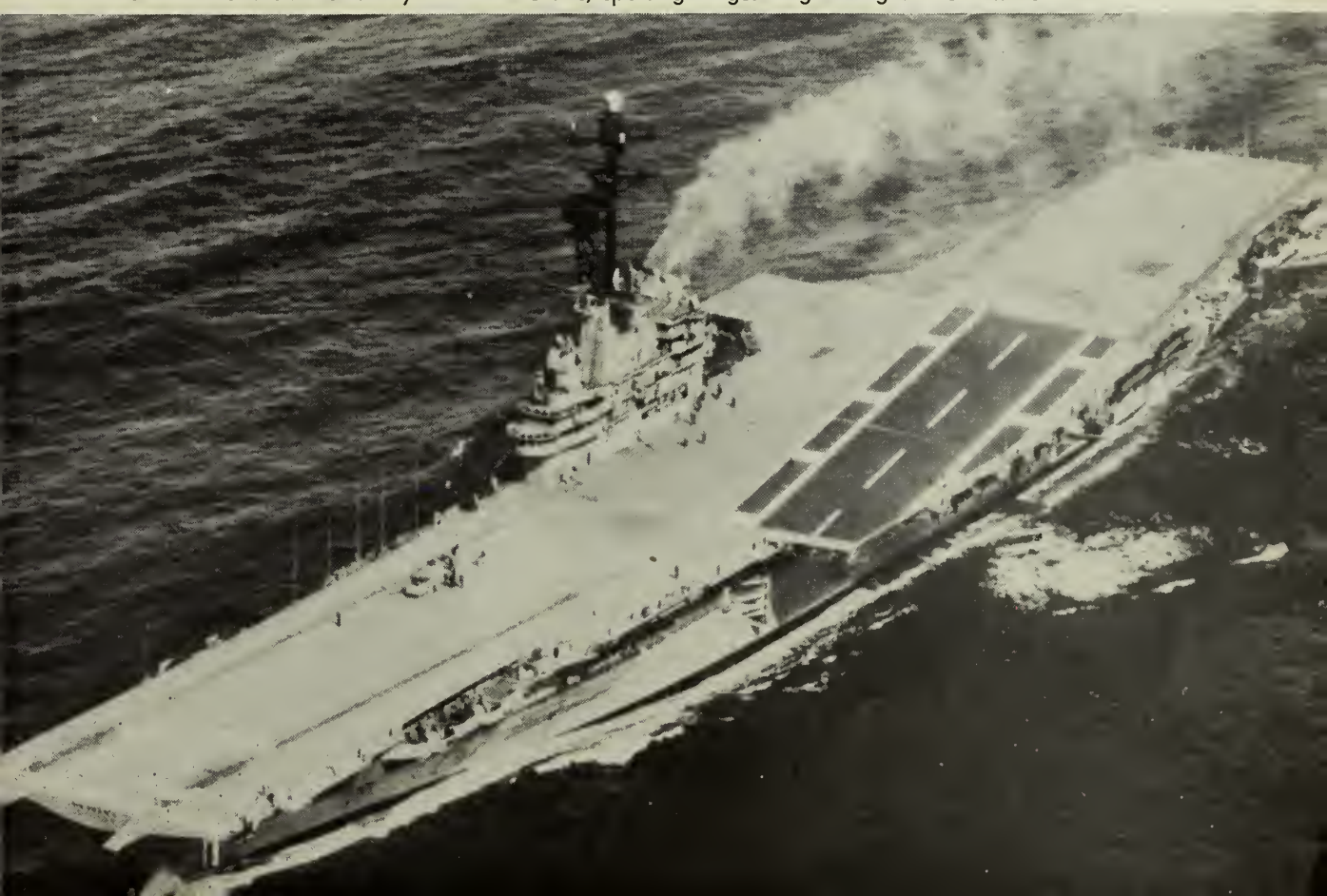
The ship can still be controlled in the former electric-hydraulic fashion. But the new equipment has the advantage of several portable remote steering units, whereby the conning officer can steer by knobs from any place on the bridge. The steersman and lee steersman can also control the ship simply by matching the conning officer's pointers, a system which eliminates all voice commands.

The ship is propelled by four screws driven by four steam turbines. Together they generate 150,000 horsepower. The eight boilers pipe steam into high-pressure and low-pressure turbines, which in turn drive each shaft through double reduction gears.

Auxiliary steam drives four turbo-generators which provide an electrical supply of 50,000 kilowatts. Two diesel generators for emergency use can generate 1700 kilowatts. Altogether *Oriskany* can supply the power needs of a city the size of San

LATEST FACILITIES to handle today's fast flying jets have been built into the carrier. Here, pilot climbs out of his F3H *Demon* after landing.

AFTER CONVERSION *USS Oriskany* looked like this, sporting larger angled flight deck and sleek closed-in bow.



UP AND DOWN—Jets like this F8U *Crusader* blast off new cats and land by mirror system like one on right.

Diego, give or take a short circuit or two. The ship also has its own distilling plant, brewing fresh water out of the sea at the rate of 112,000 gallons per day.

Oriskany now accommodates 340 officers and 2952 enlisted men. There are five lounges, a library, and 78 washrooms. A closed-circuit television system is also installed. Parts of the ship are cooled by 375 tons of air-conditioning.

The ship carries 200 inflatable liferafts with a total listed capacity of 105 per cent of the crew. In addition there are two motor whale boats for rescues at sea, the gig, two 40-foot personnel boats, two 40-foot utility boats and two 50-foot utility boats.

Sick bay has 60 beds, an operating room and a complete Xray laboratory. Separate dental offices include three dental chairs and a fully equipped prosthetic laboratory. For combat conditions there are three battle dressing stations and 165 first-aid boxes at points throughout the carrier.

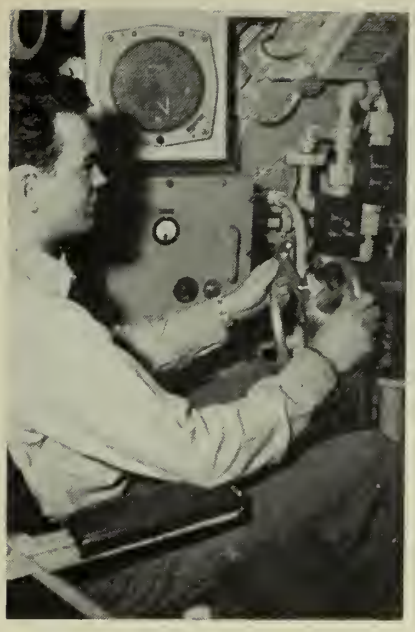
At the three ship's stores, confections, toilet articles, stationery, watches and, when overseas, silks and jewelry can be bought. Two soda fountains and numerous vending machines round out the supply facilities.

An eight-chair barber shop serves the crew and another two-chair shop, the officers. To keep uniforms ship shape the carrier has its own laundry, cobbler shop, tailor shop and a small clothing shop.

That pretty well covers the statistics of *Oriskany*.

She is now back at sea with the Fleet as a modern attack aircraft carrier showing off her stuff while she cruises through Pacific waters.

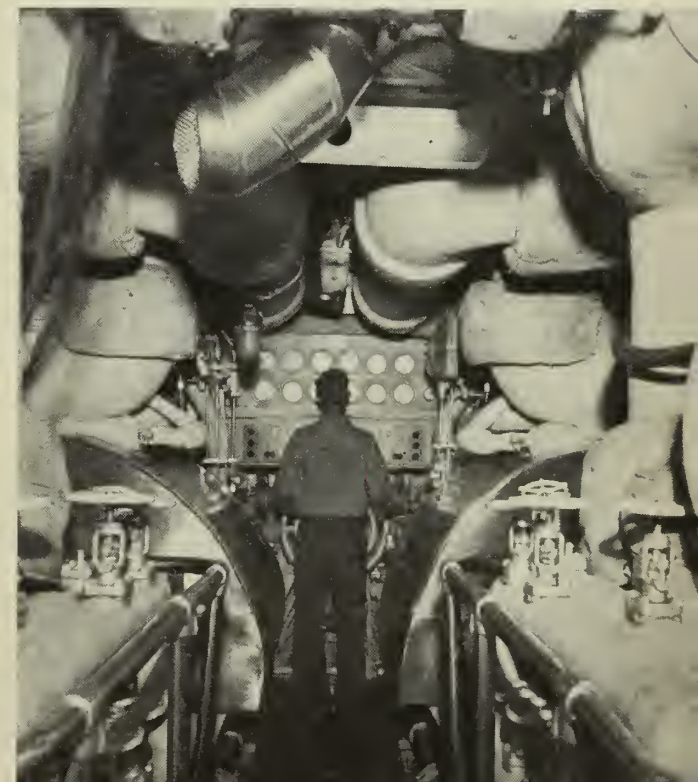
WHOA BOY—New aluminum-alloy-plated deck with stronger arresting gear helps high-powered jets land safely.



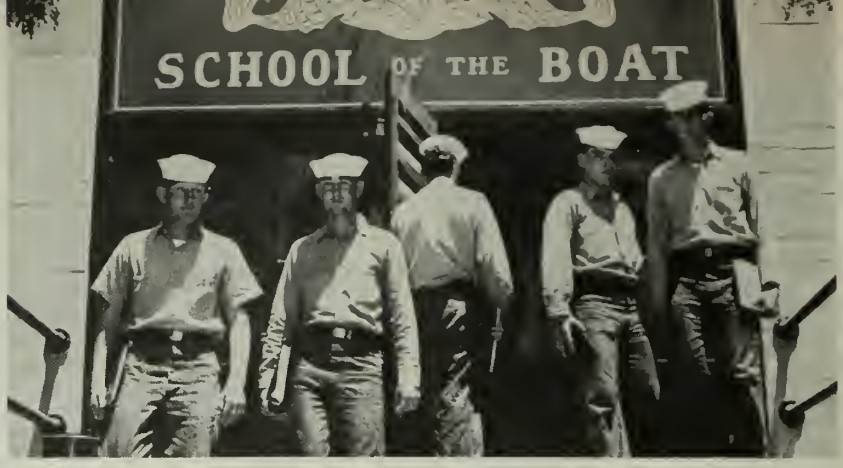
Skipjackers

THE APPEARANCE of Navy's new nuclear sub, USS *Skipjack*, SS(N) 585, is unusual. The crew that has taken this cigar-shaped ship down into the sea will attest to the fact that her performance is also unusual as *Skipjack* shattered all existing sub speed records on her builder's trials. Here's a look inside this fantastic submarine.

Top Left: T. S. Waites, YN3, mans *Skipjack's* master wheel. *Top Right: Skipjack's* new radical design makes a weird appearance as she cruises on builder's trials. *Right:* Crew is served man-sized meal on board *Skipjack*. *Bottom Right:* Engineman J. B. Thomas stands watch at the throttle control wheel. *Bottom Left:* J. B. Thomas, EM2 (SS), takes reactor fresh water temperature and generator level readings in "tunnel."



VALVE JOB—D. C. Leslie, TM1 (SS) explains valve. *Below:* D. E. Wright, ENC (SS) teaches men of *USS Tunny*.



School of the Boat

IF YOU HAVE UPPED SCOPE around Pearl Harbor lately you probably noticed many submariners busily studying the latest word on their underseas ships.

This is the result of the sub base's newly organized "School of the Boat," set up to accelerate instruction for prospective dolphin wearers in the equipment and systems of their ships. It also will augment the present number of men qualified to be assigned duty under the nuclear power and *Polaris* missile programs.

The first class of 34 students, composed of men from nine of the 18 Pearl Harbor-based submarines, was convened this spring.

While the Submarine School at New London, Conn., teaches fundamentals of the submarine, the School of the Boat teaches in detail the engineering systems and equipment of the particular submarine to which the student is assigned.

As submarines return to Pearl Harbor from deployment in the Western Pacific, each CO assigns men to the school for instructor duty.

After the instructor and students have officially met in the classroom they go back to the submarine for four weeks.

During this period the instructor helps the student become familiar with his ship and makes him feel he is identified with it. Upon completion of this probe period the whole class returns to the School of the Boat for its first and second month of work.

At the beginning of the third month the class returns to the boat where an officer examines each member concerning the subjects and sketches covered during the first two months of classwork.

The length of time between weekly school sessions depends upon the operational schedule of the submarine, the ability and drive of the student, and his ship's requirements for his services.

The program permits students to complete their submarine qualification training requirements in five to 10 weeks of classroom work during their first six months aboard.

SUB STUDENTS—Class from *USS Blackfin* (SS 322) is given the word on their ship by R. Johnson, TM2 (SS), USN.

SUB-MARINE—Trainee surfaces from 50 feet below. *Rt:* Submarine Escape Training Tower is a landmark at Pearl.

School of the Tank

WOULD YOU like to make a 50-foot water escape ascent in just eight seconds?

It's easier than you think—if you know how to do it. Just expel the air from your lungs and float to the surface. Of course, if you go up too fast you could rupture a lung.

Sounds hazardous, you say. True, but it's a necessary part of the training for scout swimmers and frogmen, Navymen and Marines.

More than 80 per cent of the 1st Marine Brigade's Reconnaissance Company from MCAS Kaneohe recently made one 18-foot and two 50-foot ascents at the Submarine Base, Pearl Harbor Escape Training Tank.

Safety is the key word while undergoing this unusual experience. Escape training begins with a detailed safety lecture, and each trainee is equipped with an inflatable lifejacket, nose-clip and safety belt with slide ring attached.

Then comes the first ascent from a depth of 18 feet.

Trainees and two instructors enter a blister-like air lock on the outside perimeter of the 100-foot escape tank. Once inside, water and air are "bled" into the air lock until pressure is equal to that inside the escape tank, permitting the inner hatch to swing open. A pressurized air space always remains at the top of the air lock.

On the surface, 18 feet above, an instructor mans a hydrophone, and his voice can be heard by all submerged instructors, trainees and water-safety men. His equipment includes a glass viewing plate which enables him to see clearly into the brightly illuminated water. Like a quarterback, he calls the plays—under water. In addition, a surface wire man is standing by a cable that leads directly to the 18-foot escape air lock, and a Scuba diver is slowly swimming down to meet the trainee.

At a word from the instructor inside the air lock, the hydrophone man loudly announces "begin training." The student, lifejacket inflated, emerges from the air lock with his slide ring attached to the surface wire. By merely grabbing this ring, instructors at various levels could stop the man's ascent. The student is met by the Scuba diver, who checks to make sure some air has been expelled from his lungs, then taps his head to begin the ascent.

Meanwhile, another water safety man swims down to the 10-foot level to check the trainee. As the student nears the surface, the surface wire man releases the slide ring from the surface wire without interrupting upward progress. As the man pops to the surface, still expelling air from his lungs, the ascent is completed.

Additional safety measures are instituted for the 50-foot ascent. A device resembling the top half of a diving bell is lowered to a depth of 45 feet with two diver-instructors inside. From this they can view each man through plate glass windows.

DIVING BELL is put to use in 100-foot tower for deep-water training.

As the student moves upward, an instructor from the 30-foot air lock swims out to check his progress. This is repeated at the 18-foot level. Then, with a "whoosh" of ejected air, he pops to the surface.

Once out of the water, trainees are required to stand almost at attention. If they are unable to do so because of dizziness, headache, or pain in lungs or joints, they may be suffering from air embolism (air forced into the blood stream). A doctor and a recompression chamber are on hand should they be needed.

—Act. MSgt. Lou Nadolny, USMC.

THREE SCIENTISTS and an engineer at NAS Lakehurst, N. J., have found a way to speed up the flow of molasses in January—or any other month.

Their "secret"—first bore holes in the sides of the container holding the gooey stuff. Then, connect the suction end of a vacuum cleaner to the holes, and watch the molasses go. The hole boring can be done with a cake mixer, which is easy to modify as a drill.

What does all this have to do

Less

with the Navy? Well, simply this.

By using this same principle on a blimp it may be possible to extend the airship's range three times or to increase its speed by 40 per cent.

The suction end of a blower system could be used to pull in the friction layer—formed by air rushing over the airship—through bored surface holes. The exhausted air would be used to speed the flow of air around the tail-fin control sur-

BIG DRAG—Scientists brief Navy project officer before flight. Shown above: Training blimp, being superseded by ZPG-2.

faces. This sort of thing is known as Boundary Layer Control.

It's being studied under a grant from the Office of Naval Research to Mississippi State University. For the study, Dr. A. Raspet, head of the Aerophysics Department, Mr. Don Boatwright and Mr. J. J. Cornish III are using a Type ZS2G-1 airship to check what is popularly known as "drag-on-the-bag."

Working with Lieutenant F. R. Carter, USN, Project Officer, they are measuring the friction area around

Drag on the Bag

blimps in a project of the Airship Test and Development Department at NAS Lakehurst. The objective of the study is to determine possible methods for increasing an airship's speed or range by reducing surface friction.

This friction, or drag, caused by the contact of air and a surface (airfoil) moving in relation to one another, acts to slow down an object moving through the air. The region in which the drag occurs is the boundary layer. Around a blimp, the layer builds up in thickness from zero at the nose to perhaps 10 feet or so at the airship's tail.

The blimp being used in the experiments has had a special laboratory compartment built into its tail to contain recording instruments and carry two men.

From the skin of the ship outward, 20 pitot tubes are mounted rake-fashion to show wind speed through the measurement of air pressure. The pitot-tube rakes come in three different lengths—three, five and 10 feet. By moving the rakes, and using various lengths of them, the thickness of the boundary layer can be determined around the entire airship.

At times, a stethoscope is used to check the vibrations caused by friction around the ship.

Dr. Raspet, in years of research on boundary layer control, has worked with assorted aircraft and has even chased down birds.

"Using a sailplane," says the doctor, "we checked the boundary layer of a black buzzard in flight. From the knowledge so gained we designed a sailplane with the aim of duplicating the boundary layer control which the black buzzard appears to possess.

"This sailplane was perfectly normal, except that it had 1,800,000 holes punched into its wing surface. By using the versatile cake mixer, which we modified to make a drill, it was possible to punch all the holes in just two days."

The doctor's research has made it possible to determine the correct placement and number of holes in an airfoil, and it has led to the use of a suction-blower system.

A similar system of boundary layer control might also work on submarines.

On a blimp, boundary layer control not only increases speed and range, but it also makes for more maneuverability, since the faster flow of air over the airship's fins makes the controls respond more quickly.

Incidentally, next time you happen to see someone checking an airship with a stethoscope, don't worry —the blimp is not sick. It's probably only having its vibrations checked.

ON THE BAG—J. J. Cornish III, of Mississippi State University, checks out gear that will measure the amount of air friction along blimp's surface.

A Royal Welcome fo

To the crews of USS *Henrico* (APA 45), *Lenawee* (APA 195) and *James E. Kyes* (DD 787), some faraway places with strange-sounding names no longer seem so far away, nor do their names sound quite so strange as they once did.

Here's the story, as received from USS *Kyes,* when the three ships recently represented the U.S. Navy at a celebration in Bangkok, Thailand.

Crossing the bar from the Gulf of Siam to head upriver to the capital of Thailand, the ships found themselves in new and different surroundings. They followed the tortuous windings of the Menam Chao Phraya River, past miles of mangrove forests on either bank. The forest was often punctuated by glimpses of agricultural plantations which stretched miles inland from the water's edge. Along the way were the stilt houses and river boats of the Thai people, who welcomed the passing ships with friendly shouts as they sailed by.

WHITE HAT PRINCESS—Princess Ubol Ratana of Thailand wears hat given on visit to *USS James E. Keyes* (DD 787). *Below:* Palace grounds are visited.

As the ship drew close to the outer edges of Bangkok, the Navymen found a picturesque mingling of traditional Thai and modern architecture plus neon signs, telephone wires and paved streets.

The ships moored alongside the Klong Toey piers at the southern end of the city with no trouble, but the fierce current later gave the destroyer *Kyes* considerable difficulty when she had to shift berth. *Kyes'* skipper, CDR A. O. McCarroll, USN, had to use a tug, an LCM, and his port anchor, before the shift could be completed.

The next three and one-half days were pleasant—and busy. The trip had been assigned as a reward and an honor because of the ships' outstanding records with the Seventh Fleet, but it still took work to get the ships ready for the general visiting scheduled for three afternoons during their stay.

Scheduling all the receptions, tours, parties and athletic events into the short in-port period was another sizable job, even with the help of the American Embassy in Bangkok, which arranged for the visit of the Navy's ships.

The visiting ships attracted over 20,000 people during the three afternoons. Among those who boarded the U.S. Navy ships for a first-hand look at America were Cadets from the Royal Thai Navy, and groups of school children. Many Americans who live in Bangkok also visited the ships.

Since *Kyes* was the only combatant ship of the three, it was paid the singular honor of a visit by His Royal Highness Crown Prince Vajiralongkorn and his sister, Princess Ubol Ratana. Twenty-two of their classmates from the Suan Chitlada School accompanied them. Eight sideboys and the ship's honor guard were called away for the young Prince. His personal flag was displayed from the yardarm while he was aboard.

As the children came aboard, they were each given a sailor cap and were then taken on a conducted tour of the main and upper deck areas. Rides on the 40mm gun mounts were the biggest attraction for the children. Later they all ate ice cream and other refreshments in the *Kyes*

Navymen in Thailand

wardroom. Before the visitors left, the skipper presented the Crown Prince with a silver bo'sun's pipe. He gave the Princess an autographed picture of the ship.

Other events of the stay in Bangkok included games of softball, basketball and soccer against Thai teams.

The soccer match against the Royal Thai Navy proved to be the highlight of the program, and was attended by His Majesty King Phumipol Aduladej. He was accompanied by Queen Sirikit and the Crown Prince and Princess.

Half-time ceremonies featured the Third Marine Division's band and drill team. Their maneuvers and showmanship seemed to thrill the onlookers as much as the game itself. The game and attendant ceremonies attracted over 25,000 spectators, one of the largest crowds ever to witness an athletic event in Bangkok.

At the end of the match, players of both teams were presented with a garland by His Majesty. CAPT C. E. King, COMPHIBRON One, accepted a silver plaque from the King which commemorated the visit to Thailand.

Other off-duty diversions included reciprocal parties given by and for members of the Royal Thai Navy, and invitations to the homes of the American colony.

Many men went on sightseeing tours. The Royal Palace and the Bangkok temples were favorite sights, as were the unique floating market and the large snake farm at the Louis Pasteur Institute. The world-famous temples seemed almost like a page out of an Arabian nights fairly tale with their intricate carvings and colored mosaics.

Most outstanding were the temples of the Emerald Buddha in the Royal Palace, and the five-and-one-half-ton solid gold Buddha, Wat Benchamabojirt. This large gold statue is left unguarded.

Entertainment, besides the relatively new Western-style night clubs and movie theaters, featured such uniquely Siamese sports as cricket-fighting, Thai boxing, and battles between fighting fish.

Rounding out the agenda were the ancient and ritualistic Thai classical dancing and modern television. A special TV treat during the visit was a Navy talent show, which leaned rather heavily on the Marine band and drill team.

The local restaurants and shops were not overlooked either. Many Navymen returned to the ships with star sapphires, Thai silk, nielloware, and other native products. Others had their first taste of such Thai delicacies as shark's fin soup, goosefoot, hundred-year-old eggs, prawn, squid and pigeon-egg soup. Those who sampled these foods reported that the taste was much better than the names might imply.

After leaving the Thailand capital city, the three ships parted company at the Bangkok bar. *Henrico* and *Lenawee* resumed their duties with the Seventh Fleet, while *Kyes* proceeded to Guam for voyage repairs before returning to Long Beach with other units of Destroyer Division 31.

ROYAL WELCOME is given by *USS Keyes'* CO to crown Prince Vajiralongkorn and his sister. *Below:* Beautiful Thailand temples attracted many Navy visitors.

Thai Sailors Visit U.S.

"HAVEN'T WE MET somewhere before?" is likely to be the reaction of some Navymen on their first encounter with the destroyer escort HTMS *Pin Klao* of the Royal Thailand Navy. And, they'll have good reason to feel that way—if they've ever been to Thailand, or served in USS *Hemminger* (DE 746).

Hemminger, a veteran of World War II service with the Pacific Fleet, has been transferred to the government of Thailand under the Military Assistance Program. Although other ships have been given to that nation through other programs, *Hemminger* is the first to be transferred to Thailand on a loan basis.

The transfer ceremony took place at the New York Naval Shipyard, Brooklyn, N. Y., where the 1240-ton DE underwent more than a year of modernization and repair after she was decommissioned in February 1958. While this work was going on, *Pin Klao's* prospective crew was trained at various U. S. Navy schools.

The ship is named for the fourth King of Thailand, who is known as the father of the Royal Thai Navy.

Top: Thai deck hands take in line as ship prepares to shift piers. *Top left:* His Excellency, Visutr Arthayukti, Ambassador from Thailand, speaks at transfer ceremonies. *Left:* The flag of Thailand is hoisted for the first time aboard *Pin Klao. Lower left:* Thai officer and enlisted man check instruments while ship is being moved. *Bottom:* Yard repairs *Hemminger.*

LETTERS TO THE EDITOR

Actual and Constructive Time

SIR: I've received semi-authoritative information in the past regarding actual time and "saved" or "constructive" time, but still have my doubts concerning its true application.

Would you compute the retainer pay of an E-7 in each of the following cases for me?

1. 19 years and 6 months actual time.
2. 19 years, 3 months actual time, plus 3 months constructive time.
3. 20 years, 6 months actual time.
4. 20 years actual time, plus 6 months constructive time.—R. B. B., ACC, USN.

• *While your letter was en route to us, we published, in our October issue (p. 44), an article which will help clear up the misunderstanding and misconceptions concerning constructive time.*

But just in case you haven't seen it, we'll give you the answers to the examples you've posed above. Keep in mind that constructive service may be counted for transfer and percentage multiple purposes, but cannot be counted for pay purposes. Title 10, U. S. Code 6330 provides that in computing retainer pay, a period of six months or more shall be counted as a full year for the purpose of basic pay, as well as transfer and percentage multiple purposes.

1. 19 years and six months actual time equals over 20 years for pay purposes and 20 for transfer purposes—$350 × 2½% × 20 = $175.00.

2. 19 years and three months actual time plus three months constructive time equals over 18 years for pay purposes and 20 years for transfer purposes—$340 × 2½% × 20 = $170.00.

Computing Final Multiple

SIR: I served in the Marine Corps for four years before I came into the Navy. During that time, I earned the Good Conduct Medal.

Can I use this time and medal in computing my final multiple for the service-wide examination for advancement in rate?—K.W.P., ET1, USN.

• *No, you may not. BuPers Inst. 1430.7C paragraph 3g (1) (b) says that service in the U.S. Marine Corps may not be counted toward the final multiple for eligibility for advancement and neither can the U.S. Marine Corps Good Conduct Medal be counted for that purpose. This should answer your question?* —ED.

This section is open to unofficial communications from within the naval service on matters of general interest. However, it is not intended to conflict in any way with Navy Regulations regarding the forwarding of official mail through channels, nor is it to substitute for the policy of obtaining information from local commands in all possible instances. Do not send postage or return envelopes. Sign full name and address. Address letter to Editor, ALL HANDS, Room 1809, Bureau of Naval Personnel, Navy Dept., Washington 25, D. C.

3. 20 years six months actual time equals over 20 years for pay purposes and 21 years for transfer purposes—$350 × 2½% × 21 = $183.75.

4. 20 years actual time plus six months constructive time equals over 20 years for pay purposes and 21 for transfer purposes—$350 × 2½% × 21 = $183.75.—ED.

Subs and Quarters

SIR: What is the latest information about subs and quarters"? I thought if messing and berthing were not furnished by the Navy that I would be entitled to an allowance for them.

I am on recruiting duty and I have been told that I'm not entitled to an allowance for quarters. They said that since I am married, my wife already receives the BAQ in her allotment.

What about that?—J. A. J., FTC, USN.

• *That's right. You cannot draw two Basic Allowances for Quarters (BAQ). The rule is covered in Para. 044035-4a of the "Navy Comptroller Manual."*

You're probably thinking about a man without dependents who is assigned to a place where no messing and berthing are available. He does get an allowance for both subsistence and quarters.

In your case, you would receive credit for the BAQ portion of your wife's allotment check. So, even though you are assigned to an S and Q billet, the only allowance to which you could be entitled is subsistence. That's $2.75 per day.

Normally, when on shore duty where messing and quarters are available, you are entitled only to ComRats. The difference between the two is about $42 a month. ComRats are now $1.15 a day and subsistence is $2.57 a day.

Just for your information, the quarters allowance for a man without dependents is $51.30 a month.—ED.

Reserve Going Regular

SIR: When I came on active duty, I understood I would be eligible to enlist in the Regular Navy between my 12th and 18th month of active service.

Recently, I was told I was ineligible to enlist as a Regular because I came on active duty before 1 Sep 1958.

I am confused, and hope you can help me out.—B. F. L., SN, USNR.

• *The man who told you couldn't become a Regular must be even more confused than you are — unless, of course, you misunderstood him, or you are ineligible for some other reason.*

Under the current regulations (BuPers Inst. 1130.4F) the 12-to-18-months business applies to Reservists who came on active duty on or after *1 Sep 1958 —and the Instruction* does not *prevent Reservists in this category from becoming Regulars.*

Enclosure 4 to that Instruction allows qualified Reservists in all rates, who came on active duty on or after 1 Sep 58, to enlist in the Regular Navy at rate held, if they do so after completing 12 months' active duty, but before 18 months are up. After 18 months, an active duty Reservist in this category would have to be in an open rating in order to become a Regular.

Since you came on active duty before 1 Sep 58, your case would be covered by enclosure 2, BuPers Inst. 1130.4F. Under this part of the Instruction you can enlist in rate held upon completion of current enlistment or extension of enlistment, regardless of whether the rate is open or not. In addition, you'd get an extra benefit by being allowed the same reenlistment bonus as that paid to USN personnel.

Reservists who came on active duty before 1 Sep 58 are also authorized to extend their obligated active duty to coincide with their expiration of enlistment, so that they will have no break in active service, and will remain eligible for reenlistment in the Regular Navy, provided they are recommended by their commanding officers.—ED.

Overseas Tour Defined

SIR: In the July issue of ALL HANDS you put out some wrong information. In your answer to a letter from T.G.B., DM2, USN, on page 27, you stated that his tour of duty overseas started on the day he arrived at his overseas station.

That is wrong. P. 3 (a) of BuPers Inst. 1300.26 defines a tour of duty overseas. It says "Time creditable on a standard uniform tour (overseas) begins with day of departure from the United States and terminates with the day of return thereto on permanent change of station."—M. J. Schwitters, LCDR, USN.

• *You're right, sir, and we stand corrected. Thanks for the tip.*—ED.

MIXED BROOD—Seaplane tender *USS Salisbury Sound* (AV 13) takes care of a brood of three destroyers and two subs while serving with Seventh Fleet.

Court Reporting

SIR: I'd like some information about stenotype. I have tried unsuccessfully so far to get answers to the following questions. Maybe you can help. Is there a school that offers stenotype training; and if so, what are the entrance requirements?

I am a graduate of Naval Justice School and I'm very interested in court reporting. I believe the stenotype method is a speedier and more efficient method of recording than shorthand.—C. H. M., YN3, USN.

• *The operation of a stenotype machine is not included in the curriculum of any Navy school. There are private stenotype schools in most large cities but the Chief of Naval Personnel neither finances nor encourages their use.*

The Stenomask system is taught in the Naval Justice School.—ED.

Terminating Teleman Rating

SIR: As one of the many men being converted from teleman/radioman into the radioman rating, I would like to find out what will happen if the conversion is not made by the set deadline.

Also, why is the Navy having men enter a rating they do not like, know or even care to enter? It is forcing quite a few to terminate their Navy careers. As the situation is now, I stand to toss out over nine years' Navy service.

I hope you can give me some information, as I have been unable to obtain it elsewhere.—W. J. W., TE/RM2, USN.

• *First, we'd like to give you a bit of background on the reasons for the disestablishment of the teleman rating.*

The Navy discovered some time ago that under combat conditions, the only really reliable method of communication was by radio code. So, the decision to disestablish the teleman rating was made, and all communicators were required to be qualified to send and receive code. (A review of the teleman qualifications had shown that the rating broke down into two groups—communicators and purely clerical personnel. After that, all commands were directed to screen their TEs, and designate them for change to either RM or YN, according to their qualifications.)

The "Manual of Qualifications for Advancement in Rating" provides for a five-year phase-in to the new rating which began in 1956. Since many of the teleman skills are the same as those required of a radioman, the only big change is the requirement for CW ability. To give you plenty of time to acquire that, the new requirements were phased in over the five-year period.

As to what will happen to those who don't make the conversion before the cut-off date, no final decision has yet been made. However, BuPers Inst. 1440.20 and the "Quals Manual" both state that no further advancements to TE(RM)1 will be authorized after the February 1961 examination. That being the case, if you want to advance in pay grade, you should make every attempt to qualify in the new skills.

Besides the long period of time which has been allowed for conversion, another factor to make conversion easier is the chance to go to radioman school.

Telemen designated for change to the RM rating are being ordered to the RM Class "A" and "B" schools as they become available.

We know that making this change may not be the easiest job in the world, but the Navy is certainly giving you all the breaks it can. And, after all, you can't expect the Navy to continue a rating which has proved unnecessary. Otherwise, we'd still have sailmakers and lamplighters.—ED.

Someone Say CO's Order Book?

SIR: I have read the series of letters concerning the CO's Order Book and I have this to say about them:

I was somewhat surprised to see that a PN2 did not know what a CO Order Book was, but I was more surprised to note the articles that followed, blasting the man. True, the question could have been looked up fairly easily, but so could three-quarters of the questions asked in the Letters to the Editor section of ALL HANDS. Many of them, I notice, are asked by yeomen who should have the references readily available.

Further, I was extremely surprised to read that the inspecting officer did not know what the CO Order Book was. What are the qualifications of an inspecting officer?

Further, I thoroughly agree with the comment that it was the command's responsibility to train the man so that he does not have to go outside for the answers to relatively simple questions.

In my own case, I have the XO of my ship to thank for much of my much needed training when I went aboard. I had just made second class with less than two years' service and had never been aboard ship nor had even had anything to do with running an office. Yet conditions were such that I was senior man in the office and had to take charge. I might have been in a real pickle, but with his patience and training I made out.

Finally, I believe too many readers took this question as an opportunity to guffaw at another man's mistake—if it was. Which one of us is perfect? Thanks.—Raymond J. Toland, PN2, USN.

• *Thank you. We had earlier decided to knock off this CO Order Book hassle, but your comments made such good sense we couldn't resist running your letter. This time, however, we mean it. Let's knock it off.*—ED.

Dolphin and Wing Insignia

SIR: In one of your issues (June 1959, page 46) concerning the Air Crew Insignia, you stated that when a submariner graduates from enlisted to officer status he must take off his enlisted dolphins and replace them with the officer's dolphins.

I believe you are wrong about that. Qualification of an officer is much different from that of an enlisted man. Before an ex-enlisted man can wear the gold dolphins of an officer, he must qualify as an officer. I believe he can continue to wear his silver dolphins after he is commissioned if he is transferred off a submarine.—R. J. D., YN2(SS), USN.

• *You're right. What we intended to convey was that an enlisted man who is qualified in submarines has the opportunity, after reaching officer status, to replace his enlisted silver dolphins with the officer's gold dolphins. But, as you say, a man must first qualify as a submarine officer. He may not, however, wear both silver and gold dolphins at the same time.*

The aircrewman's situation is similar, except that the aircrewman's wings may be worn by enlisted personnel only and the naval aviation observer's wings may be worn by officers only. Eligibility for each insigne is, of course, based on separate and distinct qualifications which must be met regardless of previous experience or background.—ED.

Ships Reunions

News of reunions of ships and organizations will be carried in this column from time to time. In planning a reunion, best results will be obtained by notifying the Editor, ALL HANDS Magazine, Room 1809, Bureau of Naval Personnel, Navy Department, Washington 25, D. C., four months in advance.

• USS *Altamaha* (CVE 183)—All former crew members who are interested in holding a reunion with time and place to be decided may write to John F. Fogarty, 1009 Baltimore Ave., Kansas City, Mo.

• USS *Gwin* (DD 433)—All World War II crew members who are interested in holding a reunion may write to Peter Negoshian, 5 Beaver St., Worcester 3, Mass.

• USS *Langley* (CVL 27)—All former officers who are interested in holding a 1960 reunion may write to Richard L. Merkel, M. D., 302 National Reserve Building, Topeka, Kans., giving time and place desired.

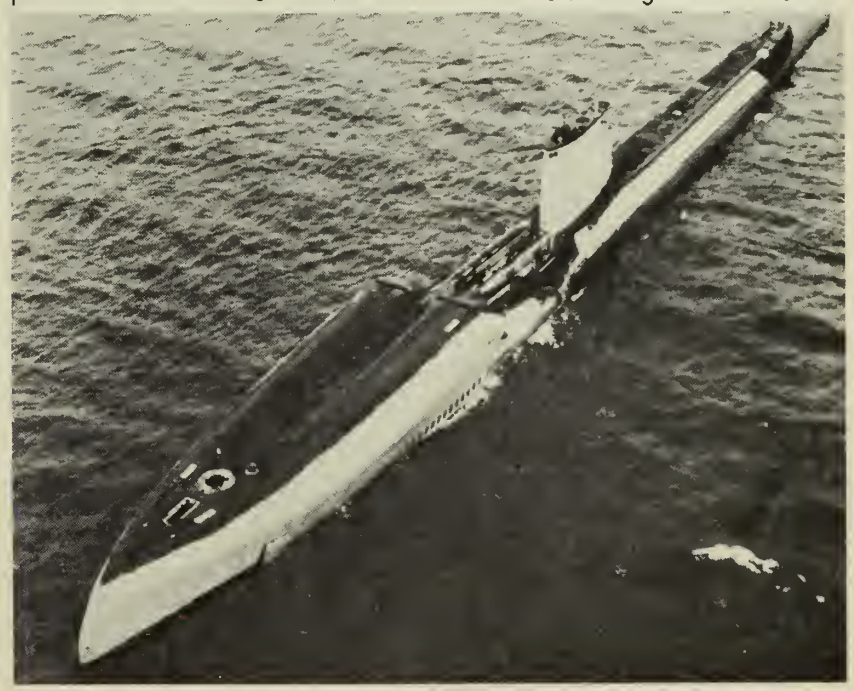
• USS *Makin Island* (CVE 93)—All former crew members and squadron personnel who are interested in holding a reunion with time and place to be decided may write to Harold A. Knox, 5502 Mountlake Terrace, Seattle, Wash.

• USS *Traw* (DE 350)—All who served on board from May 1944 through December 1945 and who are interested in holding a reunion with time and place to be designated by mutual consent may write to John West, 117 N. E. First Ave., Miami 32, Fla.

• USS *LST 503*—All crew members who are interested in holding a reunion may write to John J. Jarzyk, 27 Coleridge Ave., Yardville, N. J.

• U. S. Naval Hospital, Charleston, S. C.—All members stationed at USNH Charleston, S. C., from 1953 to 1955 and who are interested in holding a reunion may write to Dwight E. Gaines, 2226 Beryl, Fort Worth 11, Tex.

WESTWARD HO!—*USS Growler* (SSG 577) sails from Portsmouth, N. H., to join Pacific Fleet where she will become SubPac's fourth guided missile sub.



Some Comments from the Fleet about the Navy Uniform

SIR: I'll do it. I'll break a long-standing policy of mine and write a Letter to the Editor. Ordinarily I only read them, but now a subject has been touched upon which rates some loud comments.

I am referring to the letter from "D. A. A., EMC" on the subject of uniforms. I wonder how long it's been since this individual has had to wear the miserable uniform issued to enlisted men below E-7. Surely, it hasn't been so long that he has forgotten what it was like.

Doesn't he remember how absurdly uncomfortable it was (and I cannot be convinced that it *is* comfortable), and how maddening it was to find a place for such common items as cigarettes, lighter, comb, etc.? Surely he remembers (if he's so crazy about wearing his uniform ashore) the many times in a respectable bar or restaurant that he's had to reach under the table for a cigarette because they were in his *socks* of all places! The couple at the next table always seem quite amused at that.

And how about the time he had a cab waiting and ran into a drugstore to buy a pack of cigarettes? It only took the clerk a split second to hand him a pack off the shelf, but it took minutes to dig a quarter out of that watch pocket. In the meantime the clerk was shifting from one foot to the other, and the cab meter was ticking away.

And how about the time he had dinner at a friend's house and as he bent over to sit down found that "cute" neckerchief dunked into the gravy? Not like the tie you wear now, is it Chief? Yours only has one end to control and that can be clipped down.

Agreed, these are only very minor difficulties. However they do serve to create dislike for the uniform. If none of these annoying little incidents have ever happened to Chief A., he is a lucky person. You can be sure they have happened to countless others.

Civilian clothes are the only escape an enlisted man (below E-7) has from that confining suit of pajamas the Navy issues for a uniform. If they eliminate civvies, they may as well eliminate leave and liberty for many men. Don't misinterpret these comments. I admire the Chief's loyalty and pride in his service, but I'm glad there are more practical minds making the rules.

Make no mistake; when I wear my uniform I wear it with pride. However, I could wear a different uniform and still be proud of it, as long as it's Navy. At present the Navyman does look sharp, I'll agree. But then, so does a well-dressed Airman or Marine. The Navy uniform in its present state serves two useful purposes off the base that other services can't match: hitch-hiking and impressing girls (in the Midwest only, of course).

What mystifies me is that the Navy has been steadily progressive in all its endeavors *except* that of enlisted men's uniforms. Compare the Navy of 50 or 100 years ago with that of today, and you'll see that nearly everything has changed except the uniform.

I think I know why. The Navy leaders know that we have to progress if we are to maintain an effective naval force, but at the same time they feel that they should retain some tradition. They couldn't keep wooden ships with massive sails, nor could they keep the little cannons that spewed great iron balls. The uniform, then, was the most logical. There was something really traditional about that uniform, so they decided to keep it. After all, only the enlisted men have to wear it. I don't mean to sound disrespectful to the Navy officials, for Heaven knows they have a big job to do and are doing well at it.

I would like to submit my proposal for the uniform change, if I may, and I believe that a well-planned change of this sort would consume only as much, if not less, locker space than the present seabag.

First, the winter uniform could consist of, say, two navy blue single-breasted coats, three pairs of navy blue zipper-fly trousers, three or four light blue shirts, top coat (or pea coat), watch cap, gloves, and sweater.

This uniform would be much more flexible than the present one and considerably more comfortable. For instance, office personnel could wear the coat to quarters and then work with it off, saving wear and tear and thereby justifying an issue of only two. Watch-standers could wear it with pea coat, sweater, or pea coat and sweater, depending on the weather and the OOD's instructions. The same with deck crews in port. Accordingly, the liberty uniform with coat and tie would be quite presentable.

The summer uniform could be changed from whites to khakis, which are always more military looking. Why not issue, say, two khaki single-breasted coats, three or four khaki zipper-fly pants, and three or four khaki shirts. There's no reason why black shoes and socks can't be worn with both uniforms, as well as a black tie.

Along with this there are other items that could be deleted or changed at no loss. The flat hat, for one. Only a very few Naval Districts still require them, and not many of us think they are flattering, anyway. Two hat frames and a few covers are not any bulkier than that flat hat and four to six white hats.

The jersey now issued could be changed to a light-weight synthetic fabric and take up much less room.

The raincoat—a most useless piece of gear at best—could be replaced by the plastic variety that folds into a package about the size of a twenty-five cent novel. (They keep the water off you, too.) The rain shoes are rarely

Dolphins with Glasses

SIR: Can you tell me if it is possible to enter the Submarine Service if you wear glasses?

I had always understood that glasses were ruled out on submarines, because a person so handicapped would be unable to maintain an efficient lookout watch during wet weather. Lately though, I've talked to five or six submariners who say they've had fellow crew members who wore glasses.—W. J. K., SO1, USN.

• *Your past information had something in common with most scuttlebutt—it just wasn't true.*

Persons wearing glasses are just as eligible to apply for submarine training as their sharper-eyed shipmates, provided *that their vision is correctible to 20/20 in each eye.*

"BuMed Manual" lists 20/40 correctible to 20/20 as the maximum distortion allowed. (Recommendations have been made to relax this restriction. Announcement will be made if there is a change.)—ED.

Going Out on Twenty

SIR: I am about ready to transfer to the Fleet Reserve. If I go out on 19 years, six months and 10 days, will I get paid for 20 years' service?

Also, if the effective date of transfer given by the Bureau says 15 October, when should my overseas command send me to the States for release?—F. E. N., GMC, USN.

• *If you are transferred to the Fleet Reserve with 19 years and six months of day-for-day service, you'll be paid retainer pay based on 20 years' service.*

As for your release date, you can plan on leaving the Navy on the date set by the Bureau of Naval Personnel. The day you will be detached from your overseas station will have to be set by your command. But if the Bureau sets 15 October as your release date, you should be transferred early enough before that date so you can arrive at a designated separation point and still have seven days left for separation processing.—ED.

used, and could be discarded and never missed.

If this complement of clothes still consumes a little too much space, then there's the Lucky Bag found aboard almost every ship afloat which has provisions for out of season clothing. As for the economy end of it, I believe that a major change in naval uniform would definitely promote enlistment and reenlistment among the lower enlisted men. The change just might pay for itself.

There are many of us who feel that a major revision of the Navy uniform is in order and has been for a long time. There aren't many who would object, except maybe a few diehard traditionalists and the 16-year-old girls at the corner drugstore.—J. R. Sell, AD2, USN.

• *If we were sitting on the Uniform Board, we would consider your letter very carefully. It seems to have some good logical thinking behind it.*

But since we are not on the Board, we did the next best thing. We forwarded your letter for its consideration. It continually reviews Navy uniforms and quite often makes changes.

The most recent big change for enlisted men, as you remember, was the authorization of the short-sleeved sport shirt. This has been accepted rather widely in the Navy and may be the first step toward a more modern uniform for enlisted personnel.

The important thing is Fleet reaction. The men in the Fleet must like the change or it may not stay with us. You probably remember the case of the 13-button trousers. They went out in favor of the zipper front ones. Many men had been screaming for these for years. But what happened? There were so many protests about the change that 13-buttons were brought back.

The Fleet is the testing grounds. Once the Uniform Board accepts an idea for a change, they have samples made and have those worn at work and on liberty by Fleet sailors. It is the reaction to these tests that may determine whether the change is accepted or rejected.

And speaking of Fleet reaction, you will probably get some on your ideas. For more on uniforms, see pages 27-35.

—Ed.

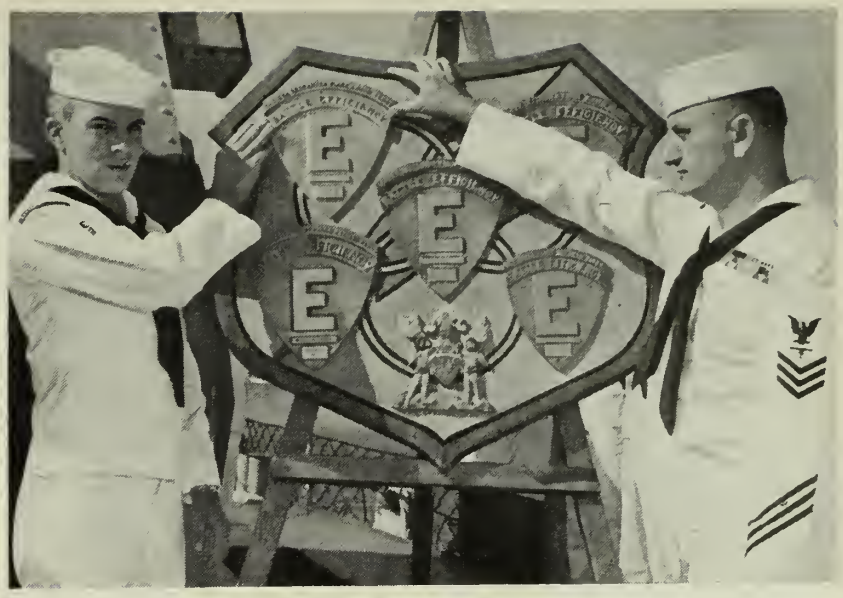
Recruiting Brassard

Sir: Since I just completed a two-year tour of recruiting duty, I read with great interest the letter on page 50 of the June issue of All Hands from F. H., OMC, and R. B. L., YNC, on the subject of the Recruiting Service brassard. I must say that I agree with those two men.

We often discussed this problem at the station, but we never got around to making any recommendations. I think a shoulder patch is the answer to the problem. A properly designed patch would look good, and contribute to the smartness of the uniform.

When the brassard should be worn seems to be debatable. We were directed to wear the brassard at all times, except when escorting military prisoners. When we wore the uniform off duty (and a good recruiter is never off duty, in uniform or out) we wore the brassard. We wore it to church, to weddings, to the movies; when we wore the uniform, we wore the brassard. We found it an excellent means of identification, and of very definite publicity value. I fail to see why the brassard should not be worn "off duty."

I have seen recruiters performing their official duties who neglected to wear the brassard. This could not happen with a shoulder patch. A recruiter without a brassard, or other means of



FOUR IN A ROW—Crew members of USS George K. Mackenzie (DD 836) add fifth 'E' plaque to their ship's collection. They earned four in consecutive years.

Distinguishing Mark of Navy Fire Fighter

Sir: I am a member of a crash crew, and have been involved in some controversy about the requirements for wearing the Fire Fighter Assistant distinguishing mark.

I have been told it is necessary to attend a Navy service school in either Crash Firefighting or Damage Control to rate the distinguishing mark. Is this true? If not, what are the requirements necessary for wearing this mark? —R. S., FN, USN.

• *No, there is no service school requirement for the designation of Fire Fighter Assistant.*

The distinguishing mark may be worn by all enlisted personnel (except damage controlmen) who qualify in accordance with Article C-7412 of the BuPers Manual.

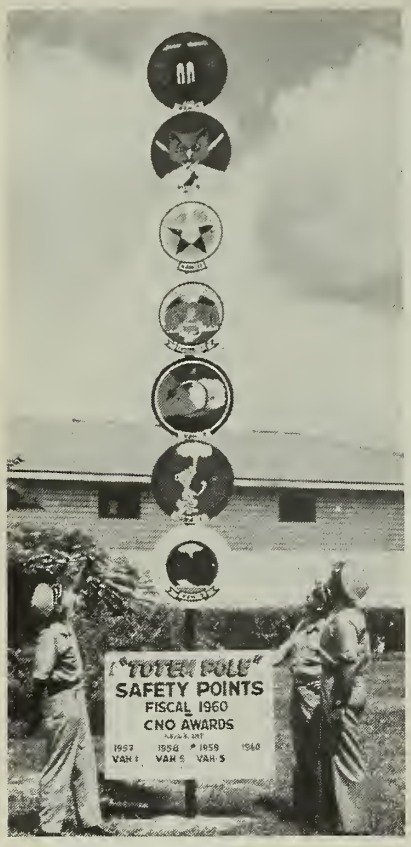
Article C-7412 says that a person can qualify as a Fire Fighter Assistant by demonstrating proficiency in practical factors, and by completing an examination.

Fire Fighter Assistant

Practical factors involved include operation of all types of fire extinguishers, use of forcible entry tools, folding and handling of all types of hose, use of various types of nozzles and applicators, operation of all portable or movable pumping equipment, and proper use of rescue breathing apparatus, inhalators and respirators.

Some of the subjects covered in the examination are: Principles of extinguishing fire by cooling and smothering; chemistry of fire, including flash points of materials and causes of fires; major naval fire fighting equipment; methods of laying hose lines, rigging jumpers around breaks in fire mains, sizing up a fire and plotting its extinguishment, and the theory of finishing up after a fire; methods and procedures for conducting shipboard firefighting instruction, and fire and rescue drills.

BuPers Manual, *incidentally, recommends that at least two fire fighting assistants should be qualified for each repair party, with two additional for each watch of the engineering repair party when ship or station organization provides that individuals during prolonged General Quarters shall alternate between engineering watch and repair party stations.* —Ed.



WHO'S ON TOP—Pole arrangement of squadron insignia shows order of competitive standing in flight safety.

identification, is just another sailor to a civilian, and much of his effectiveness as a recruiter is lost.

The brassard, as un-military as it may sometimes look, is one of the most effective means of breaking the ice between the civilian and the recruiter. A shoulder patch, or other appropriate insigne, would be even more effective, and at the same time present a smart appearance.—C. R. M., EMC, USN.

• *The recruiting service originally adopted a brassard as their badge of office because it met the following conditions: it can be worn on duty only and not on liberty (in other words, it can be removed easily); it identifies the wearer to military personnel as well as civilians; it is plainly visible and can be seen at a considerable distance; and it is suitable for wear on both enlisted and officer-type uniforms.*

The usual objection to the brassard is that it wrinkles the sleeve or it slides down. These are valid objections, but they can be corrected.

According to the Uniform Board, there is no reason why the brassard should not be neatly pinned instead of tied.

It has been suggested that the present brassard be redesigned so it could be pinned on with a lock-type pin similar to the ones used for ribbons. Then it could be put on and removed easily.

Your point about wearing the recruiter brassard while off duty sounds good on the surface, but we don't think it would look well if you were to wear it, say, at the local pub. The best thing to do is to leave it home when you are on liberty.

Your comments on a shoulder patch were discussed in the June issue. A shoulder patch might have its advantages, but it cannot be easily removed, it would be too small to be easily seen, and would not be appropriate on an officer-type uniform.—ED.

CPO Dress White Uniforms

SIR: Lately you have published a number of letters expressing various opinions about the dress white uniforms worn by CPOs. I also agree that CPO dress whites are almost useless. I have been a Chief for more than six years and during that period I have worn my whites only three times—to a ship's party and for two change of command ceremonies.

Needless to say, I too would like to see that excessive baggage give way to today's modernistic Navy.

CPO whites are far from neat. Do you think that the storage and handling problems involved in handling whites over a six-year period are warranted when they were worn only three times?

Then too, think of the good storage space lost to a pair of useless size-11 white shoes.

While speaking of shoes, has the Navy ever thought about using black shoes exclusively, doing away with the white and brown shoes? With the Army and the Air Force already using only black shoes and the Marines about to follow suit, why doesn't the Navy also keep in step and use the black shoe exclusively?—R. R. R., HMC, USN.

• *Whoa, now Chief! It is agreed that the CPO Service Dress White uniform is not being worn to any great extent at the present time. The tropical white long uniform, however, is being worn extensively and is becoming more and more popular as a summer uniform. This uniform utilizes all the principal items of the Service Dress White uniform with the exception of the coat.*

The Navy does not intend to use black shoes exclusively nor is there any indication that the Marine Corps plans to do away with their brown or white shoes either.—ED.

CPO Collar Devices

SIR: I heartily approve the Uniform Board's recent decision in regard to CPOs' wearing collar devices. But, don't you think that it would be more appropriate if they were limited to Senior and Master Chief Petty Officers?

Anyone can distinguish a Chief Petty Officer from other enlisted men and officers. The difficulty, however, now and in the future, will be distinguishing E-8s and E-9s from E-7s.

I suggest that Senior Chiefs wear a gold fouled anchor and the Master Chiefs a silver one. This would fall in line with the present system of using gold and silver collar devices for officers.

Is there any possibility that present regulations will be modified along the lines suggested above in order to give E-8s and E-9s proper recognition?—B. J. A., AKC, USN.

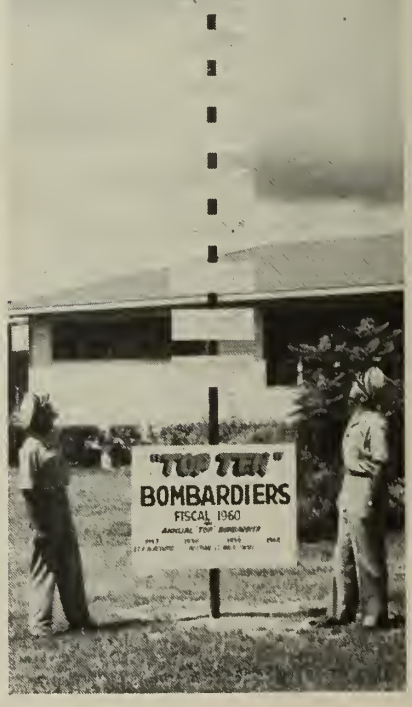
• *The CPO collar device was adopted primarily as a means of identifying CPOs when they are wearing the tropical uniform, working khaki or aviation green uniforms, or the service dress khaki uniform with the coat removed.*

Before the CPO collar device was adopted, a Chief wearing one of the uniforms mentioned above without his cap had no identification whatsoever. You could not tell that he was in the armed forces, let alone that he was a Chief Petty Officer in the U. S. Navy.

If you restricted the new CPO collar devices to E-8s and E-9s as you propose, then the same problem would be created again for E-7s.

Your suggestion, however, to modify the present device to provide a means of identifying the E-7, E-8 and E-9 is worthy of consideration and after more experience has been gained with the present insignia, there's a possibility that such a change may be made.—ED.

TOP TEN bombardiers of Heavy Attack Wing One are on 'totem pole' in front of Exchange at Sanford, Fla.



A Report on the Uniform of the Day

ON THE FOLLOWING eight pages, you'll find most of the representative uniforms worn by men and women, officers and enlisted personnel, of the United States Navy.

To judge by the number of letters received by ALL HANDS (see, for example, page 24 of this issue), the uniform is a subject about which almost everyone feels strongly. However, in this connection, we'd like to make a few points:

The uniform *does* change to meet current conditions (honest, it does!); generally speaking, most Navymen take pride in wearing it; all things considered, it's reasonably practical.

Let's back off and take a look at our present-day uniform and how it got that way.

During the first 40 or so years of the Navy's existence, there was no prescribed uniform for a ship's crew. They wore whatever the skipper had decided would be suitable for the slop chest. (Imagine the howls of protest if such a system were in effect today!)

One of the first recorded descriptions of an enlisted man's uniform comes from the Navy files of Commodore Stephen Decatur. While on board the frigates *United States* and *Macedonia,* the sailors wore "glazed canvas hats with stiff brims, decked with streamers of ribbon, blue jackets buttoned loosely over waistcoats and blue trousers with bell bottoms."

Three years later (in 1817), SecNav first prescribed a summer and winter uniform for EMs. The summer uniform was "a white duck jacket, trousers and vest." The winter uniform was similar to that of Decatur's men except it was "Blue jacket and trousers, red vest, yellow buttons and black hat."

The first officers of the Continental Navy, vintage 1776, were dressed in an outfit made up of a blue coat with red lapels, a standing collar, flat yellow buttons, blue breeches and red waistcoat. However, it is doubtful if many officers ever gathered together a complete outfit as prescribed. There was the cost to consider, for one thing and, at that time, a captain made less than a seaman does today. In actual practice, it is probable that captains dressed pretty much as they pleased.

By 1841, symbols of rank consisted of the number of buttons worn by an officer. A captain's full dress coat was ornamented only with two rows of nine buttons down the front, four buttons on the top of each cuff and three on the skirt of the coat. Officers with lesser rank wore fewer buttons. This plan did not work too well so, four years later, epaulets returned in all their glory.

Two new specialties that have developed greatly since World War I have been responsible for two additions to officers' uniforms. The aviation branch found that blues were unsuitable for flying and as a result, the green uniform was adopted for duty involving flying. The men of the submarine forces found the blues too warm and bulky for wear while in the boats and khakis supplied the answer.

Within recent years there have been only minor changes to the officers' and CPOs' uniforms. What changes have been made were in the interest of comfort and styling and haven't outwardly changed the over-all appearance of the uniform.

AS MIGHT BE ASSUMED, how the uniform was worn was a somewhat free-and-easy proposition during the days when the status of the uniform itself was in doubt. Today, there's a right way and a wrong way to wear almost every piece of gear. Here are a few pointers for enlisted men below the grade of CPO:

- Wear your hat squarely on your head, bottom edge horizontal. Don't roll, bend or crush the brim. Keep it clean, and replace it when it is permanently spotted or frayed. Wear your correct size. The diagonal woven seam of the brim should be to the rear. Don't wear your hat on the back of your head. The white hat may be worn with any type of uniform.
- Press and roll your neckerchief only. Do not press flat after rolling. The upper edge of the knot should be even with the point of the V on your jumper. Tie a large square knot and keep ends even.
- Unit identifying sleeve marks are worn on the right sleeve of blue dress and white jumpers by all enlisted personnel below the grade of CPO attached to authorized units. They are worn parallel to and with top edge three-eighths of an inch below the lower row of stitching on the right shoulder seam centered on the outer face of the sleeve.
- Wear only regulation ribbons. Don't use cellophane covered or plastic impregnated types. Wear them in proper order. The bottom row is one-quarter inch above the pocket, and centered. There should be no space between the rows.
- The dress blue jumper should hang straight (not form fitting) and should cover all but the lowest side button of the trousers. Striping should, of course, always be kept clean. Don't fold back the cuffs of your jumper. Keep them buttoned.
- The undress blue jumper should fall naturally (not form fitting), and should cover all but the lowest side button of your trousers. Sleeves should be long enough to reach your wrist joint. Don't roll them (sleeves, not joints).
- Dress blue, undress blue and undress white trousers should, of course, be pressed, and should hang naturally with no break. The bottom front barely touches the bottom of shoe lacing. Dungaree trousers should be clean and not torn or frayed but need not be pressed. The bottom edge should be cuffless and neatly hemmed. Do not roll or fold up bottoms except when the job requires it.
- Wear black socks only. Shoes should be kept in good condition top and bottom. Solid soles and heels help to prevent tired feet. Keep your shoes shined. Be sure to keep your work shoes in as good condition as possible. They're more comfortable and safer.
- Personal gear, such as pencils, identification cards, cigarettes, jewelry and wallets should not be carried where they can be seen.
- You'll find much more information concerning your uniform in earlier issues of ALL HANDS. June 1955, pages 28 to 37, gives the history of the uniform; August 1955, pages 29 to 33, tells you how to keep your uniform shipshape; September 1955, pages 31 to 35, gives you good pointers on stowing it; the centerspread of July 1957 tells you how to wear it; the December 1957 issue (pg 51) has more comments.

UNITED STATES

Enlisted Men

Full Dress
Blue B

Service Dress
Blue B

Undress Blue B
Working

Full Dress
White

Service Dress
White

Chief Petty Officers

Full Dress
Blue B

Service Dress
Blue B

Dinner Dress
Blue B

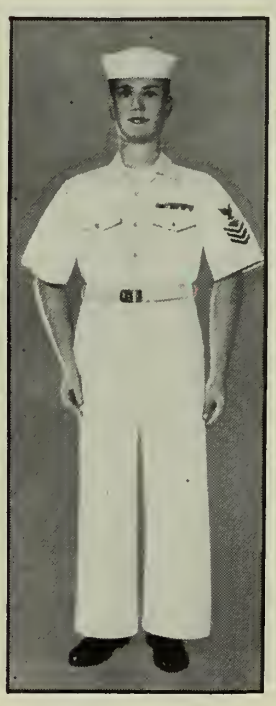
Blue Working

Full Dress
White

Prepared by ALL HANDS Magazine

NAVY UNIFORMS

Undress White A Working



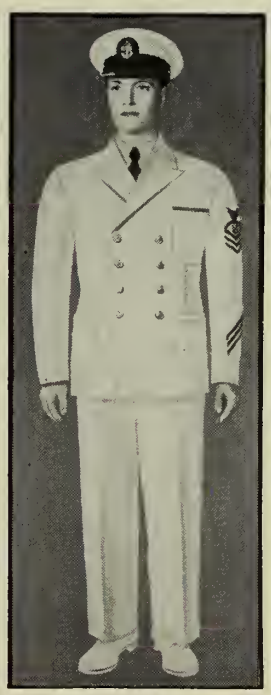
Tropical White Long

Undress White B Working

Tropical Khaki
(also Tropical *White*)

Dungaree Working

Dinner Dress White



Service Dress White

Tropical White Long

Tropical White

Dungaree Working

continued on next page

Chief Petty Officers continued

Aviation Green Working

Service Dress Khaki

Khaki Working

Tropical Khaki Long

Tropical Khaki

Commissioned Officers continued

Dinner Dress White Jacket

Full Dress White

Service Dress White

Tropical White Long

Tropical White

Prepared by All Hands Magazine

Commissioned Officers

Full Dress
Blue B

Service Dress
Blue B

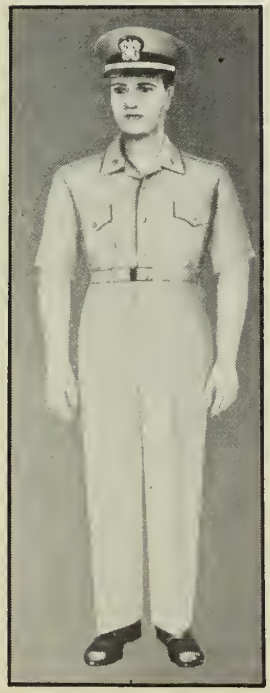
Dinner Dress
Blue B

Service Dress
Blue C

Blue Working

Service Dress
Khaki

Khaki Working



Tropical Khaki
Long

Tropical Khaki

Dungaree
Working

continued on next page

Midshipmen (USNA and NROTC)

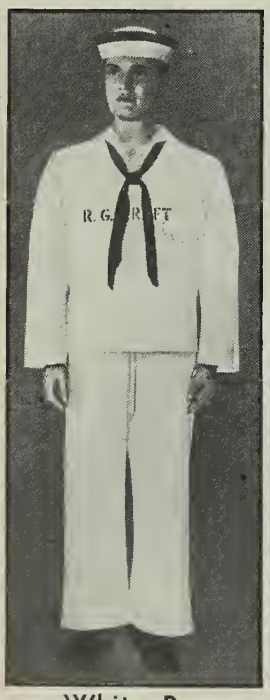
Full Dress
Blue B
Midshipman USNA
(Evening Dress—miniature medals)

Service Dress
Blue B
* Midshipman
USNA and NROTC

Blue Working
Midshipman USNA
(Tie worn out—NROTC)

Dinner Dress
Blue B
* Midshipman
USNA and NROTC

Full Dress
Blue C
Midshipman USNA



White B
Working
Midshipman USNA

Infantry Dress F
Midshipman USNA

Dungaree
Working
Midshipman
USNA and NROTC

Service Dress
Blue B
NAVCAD and AOC
(Dinner Dress with bow tie)

Service Dress
White
NAVCAD and AOC

Prepared by All Hands Magazine

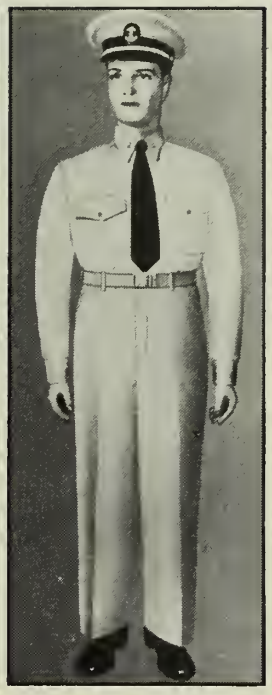
**uniforms are the same except for appropriate designation of rank and class*

NavCads and AOC

Service Dress Blue C
Midshipman USNA

Service Dress White
Midshipman USNA and NROTC

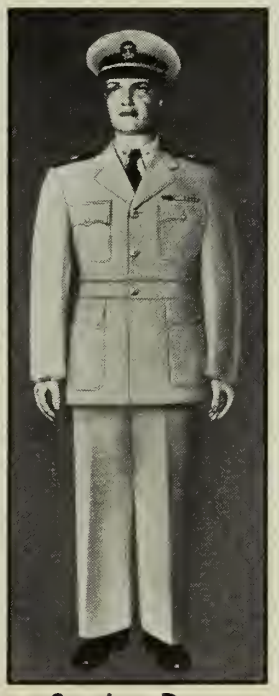
Service Dress Khaki
Midshipman USNA and NROTC



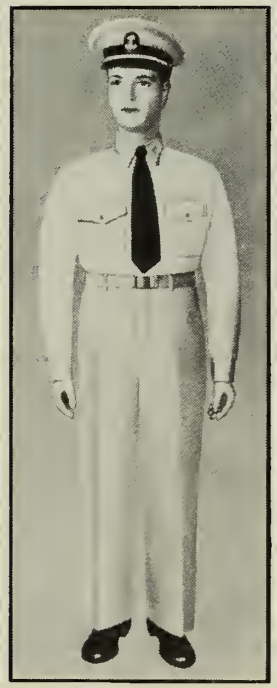
Khaki Working
Midshipman USNA and NROTC

Tropical White Long
Midshipman USNA

Tropical White Long
NAVCAD and AOC



Service Dress Khaki
NAVCAD and AOC



Khaki Working
NAVCAD and AOC

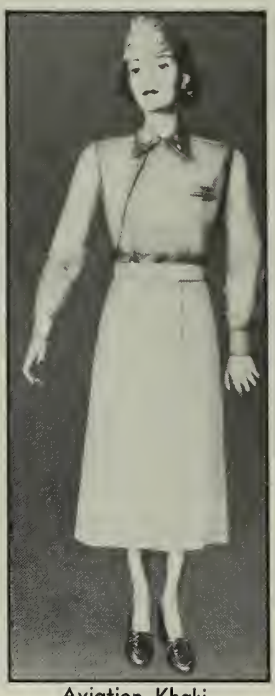
Tropical Khaki Long
NAVCAD and AOC

Aviation Green Working
NAVCAD and AOC

Women Officers

White
Indoor Duty
NURSE CORPS

Aviation Green
Working
NURSE CORPS



Aviation Khaki
Working
NURSE CORPS

Aviation Green
Working
NURSE CORPS

Full Dress
Blue B

Women Officers cont.

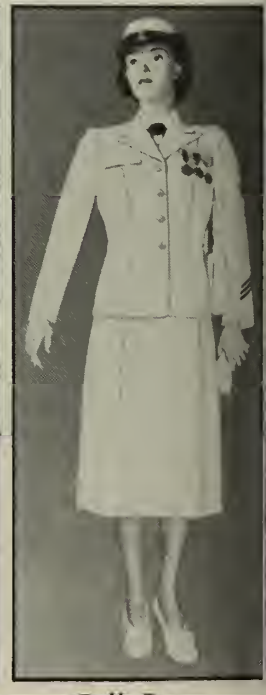
Enlisted WAVES

Gray Working

Blue Working

Full Dress
Blue B

Service Dress
Blue B



Full Dress
White

Prepared by All Hands Magazine

Service Dress
Blue B

Full Dress
White

Service Dress
White

Service Dress
Blue C

Service Dress
Light Blue

Service Dress
White

Service Dress
Light Blue

Gray Working

Blue Working

Dungaree
Working

★ ★ ★ ★ TODAY'S NAVY ★ ★ ★ ★

T FORMATION—"Flying Irish", NAR Attack Squadron 673, NAS Marietta, Ga., line up in front of AD *Skyraider* to tackle training cruise at NAS New Orleans.

CruDesPac 'E' Awards

A Long Beach-based destroyer tender, USS *Bryce Canyon* (AD 36), tops a list of 20 Cruiser-Destroyer Force, Pacific Fleet, ships which won Battle Efficiency "E" awards for fiscal 1959.

"E" awards are presented annually to those CRUDESPAC ships considered most outstanding in combat readiness competition. Judging includes the areas of gunnery, operations, engineering, antisubmarine warfare and repair.

For *Bryce Canyon*, this year's "E" made it five successive years she's achieved the award, entitling her to the rare and coveted gold "E."

Other award-winning ships were USS *Helena* (CA 75), Piedmont (AD 17), *Rogers* (DDR 876), *George K. MacKenzie* (DD 836), *Bradford* (DD 545), *John A. Bole* (DD 755), *Everett F. Larson* (DDR 830).

Also *Chevalier* (DDR 805), *Ernest G. Small* (DDR 838), *Uhlmann* (DD 687), *Gregory* (DD 802), *Cushing* (DD 797), *Ingersoll* (DD 652).

Others are USS *John S. McCain* (DL 3), *Preston* (DD 795), *Vammen* (DE 644), *Walton* (DE 361), *Lowe* (DER 325), *Brister* (DER 327).

Rating special mention were the gun crews of the heavy cruiser USS *Toledo* (CA 133). While the ship itself did not win an over-all "E" every one of her 8- and 5-inch guns was awarded a gunnery "E."

VADM F. N. Kivette, COMSEVENTHFLT, called it "the finest shooting I have seen anywhere in recent years."

Aviation Awards

Thirty-five Navy and Marine Corps air units have earned Chief of Naval Operations Aviation Safety Awards for fiscal year 1959—the safest such period in Naval Aviation records.

The accident rate for fiscal '59 was seven per cent below that for 1958, which had seen the lowest mark in seven years of a consistent downward trend. Spelled out, the '59 figures meant that 41 less lives were lost, there were 88 fewer major accidents, and damage and destruction to aircraft and equipment went down by more than $30,000,000.

Part of the improvement is due to the increased use of *Forrestal*-class carriers, which have an accident rate about half that of the smaller *Essex*-class flat-tops. There was only one fatal landing accident on the large carriers, as against 10 on the smaller ones.

The 35 top units were selected for the annual awards from among the major Navy and Marine Corps air commands, both Regular and Reserve. The winners receive a permanent citation and a bronze plaque.

A special award went to USS *Thetis Bay* (LPH 63), which has had over 16,000 accident-free landings since becoming an amphibious assault ship.

Besides *Thetis Bay* and the 34 other winners of CNO awards, 319 additional Regular and Reserve Navy and Marine Corps units which had an accident-free year were named for other safety awards.

The CNO award winners were:

Patrol Squadron 49, Naval Station, Bermuda.

USS *Thetis Bay* (LPH 6), Long Beach, Calif.

Fighter Squadron 124, NAS Moffett Field, Calif.

Fighter Squadron 193, NAS Moffett Field.

Attack Squadron 152, NAS Moffett Field (USS *Oriskany*—CVA 34).

Attack Squadron 155, NAS Moffett Field (USS *Oriskany*).

Helicopter Transport Squadron 361, MCAF Santa Ana, Calif.

Utility Squadron 7, NAAS Brown Field, Calif.

Fighter Squadron 14, NAS Cecil

YESTERDAY'S NAVY

On 9 Nov 1944 USS *Flounder* (SS 251) sank the German submarine U-537 in the Java Sea. On 10 Nov 1864 a party of Confederate officers and enlisted men was captured on board the American passenger steamer *Salvador* off Panama by a force from USS *Lancaster*. On 15 Nov 1776 Congress established the relative rank of Army and Navy officers. On 18 Nov 1890 USS *Maine* was launched at Brooklyn, N. Y. On 21 Nov 1943 USS *Nautilus* (SS 168) landed a Marine reconnaissance company on Abemama, Gilbert Islands. On 21 Nov 1918 the German High Seas Fleet of World War I surrendered.

Field, Fla. (USS *Franklin D. Roosevelt*—CVA 42).

Attack Squadron 35, NAS Jacksonville, Fla.

Attack Squadron 106, NAS Jacksonville (USS *Essex*—CVA 9).

Patrol Squadron 5, NAS Jacksonville.

Patrol Squadron 741, NAS Jacksonville.

Heavy Attack Squadron 5, NAAS Sanford, Fla. (*Forrestal*—CVA 59).

Basic Training Group 3, NAAS Whiting Field, Pensacola, Fla.

Basic Training Group 9, NAS Pensacola.

CIC School, NAS Glynco, Ga.

Attack Squadron 672, NARTU Atlanta, Ga.

Patrol Squadron 22, NAS Barbers Point, Hawaii.

Fleet Tactical Support Squadron 21, NAS Barbers Point.

Airborne Early Warning Squadron 12, NAS Barbers Point.

Fleet Aircraft Support Squadron 117, NAS Barbers Point.

Fighter Squadron 727, NAS Glenview, Ill.

Fleet Tactical Support Squadron 822, NAS New Orleans, La.

Airship Airborne Early Warning Squadron 1, NAS Lakehurst, N. J.

Helicopter Utility Squadron 751, NAS Lakehurst.

Marine All-Weather Fighter Squadron 114, MCAS Cherry Point, N. C. *Franklin D. Roosevelt.*

Marine Training Squadron 1, MCAS Cherry Point.

Marine Fighter Squadron 218, NAS Willow Grove, Pa.

Advanced Training Unit 501, NAS Corpus Christi, Tex.

Air Anti-Submarine Squadron 27, NAS Norfolk, Va.

Helicopter Anti-Submarine Squadron 7, NAS Norfolk (USS *Valley Forge*—CVS 45).

Fleet Aircraft Service Squadron 3, NAS Norfolk.

Air Anti-Submarine Squadron 861, NAS Norfolk.

Heavy Attack Squadron 6, NAS Whidbey Island, Wash.

Ocean Variety of Astors

Astor—a new submarine weapon system capable of destroying submarines as well as surface ships with greater effectiveness than any operational underwater weapon, is now being developed.

This foe of enemy subs is a high-speed electric torpedo that will be launched by submarines.

WATER WAGON—*USS Newport News* read signal and brought in water.

— And Not a Drop to Drink

Thirty inhabitants of tiny Castle Island in the Caribbean were in the same predicament as the legendary Ancient Mariner — "water, water everywhere, nor any drop to drink" —until the cruiser USS *Newport News* (CA 148) came to their aid.

Castle Island, a small sliver of land containing a lighthouse, some 100 miles north of Cuba, depends entirely upon rainfall for its fresh water supply. When no rain fell for more than 20 days, reserve stocks ran low, and residents were rationed to two glasses per day.

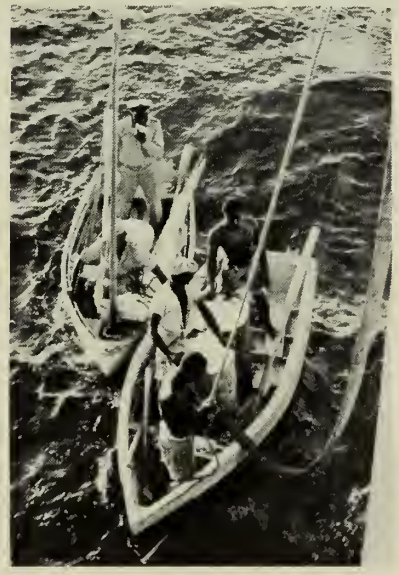
The island is pretty well cut off from the outside world. There is no radio transmitter. A radio receiver and a monthly visit by a mail boat form the only links with civilization.

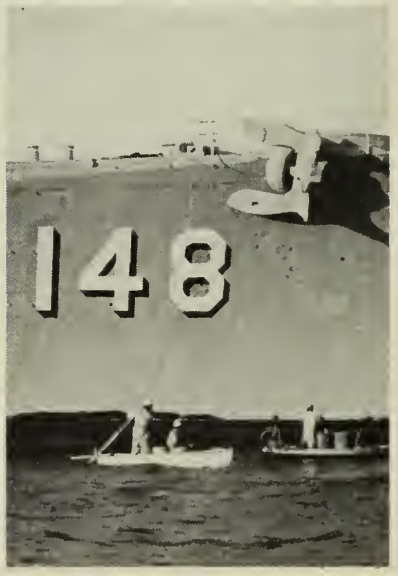
With the rationed water supply due to become exhausted soon, Chief Keeper C. N. Williams began flying the international distress signal from the top of the lighthouse.

According to Williams, several days went by during which passing ships either didn't see or ignored the signal.

The situation had reached the desperate stage when Fred Wilkerson, SM2, USN, aboard the Guantanamo Bay-bound *Newport News*, spotted the distress flag, and the big cruiser altered course and sped to the rescue.

Many barrels of fresh water were put ashore by small boat, and the Nassau Lighthouse Service was notified of the islander's plight via ship's radio, before *Newport News* resumed her trip to Gitmo.





THIRST QUENCHER—Castle Island boats pick up fresh water from cruiser *USS Newport News* (CA 148) as the cruiser answers lighthouse signal.

NAVY SERVICE JACKETS

The Navy is a busy place. Here are some of the events which have occurred recently:

• LTJG William Maliczowski, of VAH-11, an Electronics LDO, has been named this year's top bombardier of the Atlantic Fleet.

• More than 250 dependents of crew members of USS *Saint Paul* (CA 73) had a reunion when USNS *General Daniel I. Sultan* (AP 120) moored at Yokohama, following transfer of *St. Paul* to Yokosuka.

• USS *Peterson* (DE 152) has picked up her Battle Efficiency "E" for the third consecutive year, this time in competition with DesDiv 601.

• USS *Strive* (MMC 1) and *Sustain* (MME 2) have been transferred to the Norwegian government. Their new names will be *KNM Tyr* (N-47) and *KNM Gor* (N-48) respectively.

• USS *Leary* (DDR 879) claims to have won all available "E" awards in Destroyer Squadron Six for this fiscal year.

• USS *Midway* (CVA 41) has deployed for a seven-month tour of duty with the Seventh Fleet.

• More than 1200 NROTC midshipmen took their three-week aviation indoctrination cruise at NAS, Corpus Christi, and their three weeks of amphibious and surface activities at Coronado, Calif.

• *Patrick Henry,* SSB(N) 599, second in a series of *Polaris*-equipped atomic submarines, has been launched at Groton, Conn.

• USS *Munsee* (ATF 107) was host to a three-nation picnic during its stop-over at Balboa, C. Z. *Munsee* provided the steak and hot dogs; the Turkish minesweeper TGC *Samsun* came up with the side dishes; and the Spanish minesweeper SNS *Ebro* helped all hands wash it down with you-know-what.

• The guided missile *Bullpup* is now operational in the Sixth Fleet. Attack Squadron 34, first squadron in the Atlantic Fleet to be so equipped, is stationed aboard USS *Saratoga* (CVA 60). In the Seventh Fleet, USS *Lexington* (CVA 16) with VA 212 on board, also carries *Bullpup.*

• Three more nuclear *Polaris* subs have been named. The seventh, eighth and ninth respectively of this type, they are: *Sam Houston* SSB (N) 609; *Thomas A. Edison,* SSB (N) 610; *John Marshall,* SSB(N) 611.

• USS *Skipjack,* SS(N) 585, is now on her shakedown cruise to European ports.

• USS *Thetis Bay* (LPH 6) was busy during August as a base for helicopter operations which provided assistance to residents of flooded central Taiwan.

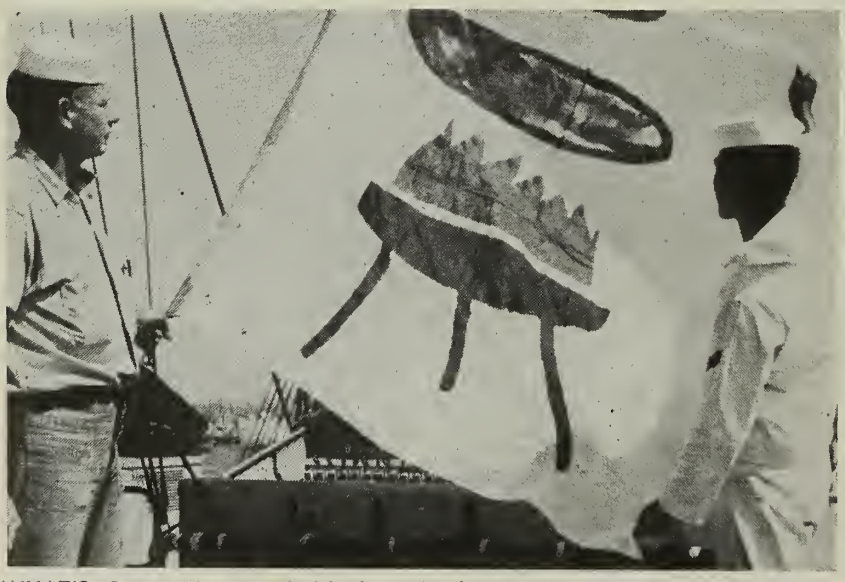
• *Theodore Roosevelt,* third in the series of *Polaris*-equipped submarines, was launched in the Mare Island Naval Shipyard, Vallejo, Calif. Her hull number will be SS(N) 600.

• John T. Ardanowski, AA, and Henry Eggie, AN, both of NAAS Chase Field, Beeville, Tex., more than earned their month's pay recently. Each is credited with averting a wheels-up landing by an F9F-8 *Cougar* jet. Estimated non-cost per plane—$50,000.

• USS *Herbert J. Thomas* (DDR 833) claims to be the first Navy ship to attend an official 49-star flag-raising ceremony. Place: Sitka, Alaska; time: 0800, 4 Jul 1959.

• USS *Carp* (SS 338) departed Pearl Harbor for duty with the Atlantic Fleet and her new home port of Norfolk, Va.

• The Military Sea Transportation Service has now delivered more than five million tons of supplies in support of Arctic operations within the past nine years. The ship: USNS *McGraw* (MCV 796); the place: Greenland.



WHAT'S COOKING?—Red, black and white flag of USS *Oakhill* (LSD 7) denotes barbecue is in session on main deck and eliminates necessity of signaling to ships to explain what is causing fire and smoke on her decks.

Headed for a Gold 'E'

Five Amphibious Force, U. S. Atlantic Fleet ships and one landing craft, utility, have won a 1959 Battle Efficiency Award. They are USS *Taconic* (AGC 17), *Rankin* (AKA 103), *Rockbridge* (APA 228), *Hermitage* (LSD 34), *Donner* (LSD 20), and *LCU 1467.*

This is the fourth consecutive "E" award won by *Rankin,* the third captured by *Rockbridge,* and the second for *Taconic.*

Rankin now has only one to go to win the Gold "E" which denotes that a ship has won the Battle Efficiency Award five years in a row. Ships paint a hashmark under a white "E" for the second, third and fourth consecutive wins.

Ships are judged on navigation, operations, engineering, gunnery and administration.

Great Lakes Reserve Fleet

Puzzled Great Lakes mariners scratched their heads and loafed through the *International Code of Signals* earlier this year when some Naval Reserve training ships began flying a new flaghoist from their signal halyards.

They were even more startled when they discovered that the combination of the *Code, Hotel* and *Papa* flags meant "Submarines are exercising in this vicinity. You should navigate with great caution."

The submarines referred to were

Navyman Brings Japanese Family News of Missing Son After 17 Years

During World War II the Yamashiro family of Akamichi Village, Okinawa, lost two of their sons.

One day, 17 years later, William C. Moberg, SN, USN, of USS *Hornet* (CVS 12) visited the family, paid his respects, and delivered some letters that had never been mailed, as well as photos and a diary that had been kept by one of the sons.

Moberg's interest in the Orient and in the Japanese people dates back many years. Back in 1952, when he was a 12-year-old in St. Paul, Minn., a veteran of WW II passed on to him some pictures and documents written in Japanese.

Later, while Moberg was attending the University of Minnesota, he showed the documents to his history professor. A translation of some of the papers showed that the owner had lived on the island of Okinawa. After learning this, Moberg hoped that he might someday return them personally to the Yamashiro family.

In September 1958, Moberg received orders to active duty in the Navy.

The first step in his journey to Okinawa was accomplished when he was ordered to the U. S. Seventh Fleet as a member of the Staff of Commander Carrier Division Nineteen aboard *Hornet*.

When the ship arrived for a one-day stop at Okinawa, he asked the Public Information Officer of the government of the Ryukyu Islands for help. The latter furnished a car and an interpreter.

RETURNED—W. C. Moberg, SN, USNR, delivers WW II Japanese soldier's letters and papers to his family in Okinawa. Moberg's ship spent day there.

Some of the documents included addresses which identified the soldiers in a photograph as Seitoku and Kenho Yamashiro, and Seizen and Zenkichi Shimabuku, all of Akamichi Village.

When the group found the family, Mrs. Kama Yamashiro, 62, told Moberg that one of the photos he returned was the only one left of her son, Seitoku.

"They just couldn't believe at first that an American sailor had taken the trouble to bring news of their son who had been missing for 17 years," Moberg said. "I just can't begin to explain how grateful they were. The happiness they showed made the trip worth it."

After talking with the family, Seaman Moberg learned that Seitoku Yamashiro had gone to Kainan Island off the China mainland as a civilian attached to the Japanese Army and later died when his ship was lost at sea. The other son, Kenho, had enlisted in the Imperial Japanese Army, served in China and was later killed in action. It was his papers Moberg returned.

USS *Torsk* (SS 423) and *Sablefish* (SS 303). The two Atlantic Fleet subs spent nearly two weeks helping the Great Lakes Reserve Fleet and Reserve fliers from NAS Glenview learn the latest in antisubmarine warfare techniques. The subs were there during Operation Inland Seas (ALL HANDS, September 1959).

More than 450 Ninth Naval District Reservists participated in the ASW training aboard USS *Daniel A. Joy* (DE 585), and the patrol craft escorts *Worland, Havre, Ely, Farmington, Lamar* and *Portage*.

Two areas, each of some 900 square miles, were selected for the exercises. One was in Lake Huron, just north of Saginaw Bay off Port Austin, Mich. The other was in Lake Michigan, opposite Milwaukee, Wis. They were chosen to provide water deep enough for safe maneuvering where lake bottoms were relatively free of sunken ships. An added factor was the absence of heavy ship traffic in those locations.

Providence Is Back

USS *Providence*, the former CL 82, is now back in commission as a guided missile light cruiser. She returned to active duty, as CLG 6, in ceremonies at the Boston Naval Shipyard, Charlestown, Mass.

The present *Providence*, third ship of the Fleet to bear the name, was built at Quincy, Mass., in 1944. She saw active service from 1945 to 1949, at which time she was assigned to the Reserve Fleet. Conversion of the 15,000-ton cruiser began in June 1957, and sea trials were completed on 20 Jun 1959.

Providence is armed with *Terrier*, a supersonic antiaircraft weapon capable of intercepting enemy aircraft under all weather conditions. Other armament includes one 6-inch turret and one 5-inch mount. The *Terrier* launcher was installed in February of this year.

The launching system carries the "birds" in a fully ready position in below-decks magazines. In operation, the missiles are automatically selected and loaded onto the launcher, pointed in the direction called for by the fire control system and launched at an exact pre-computed instant to hit their target at the most desirable range.

Providence has a crew of about 70 officers and 1000 Bluejackets.

1959 Softball Champs

The Atlantic Fleet Destroyer Force's softball team proved to be the best "mudders" when they surged from behind to defeat every team entered in the 1959 All-Navy Softball Championship play-offs and capture the coveted crown.

This year's double elimination tournament was played under sticky heat and repeated showers at Norfolk, Va. The host, COMSERVLANT, tried to improve playing conditions as they shifted play to four different bases in an effort to find a dry field. In spite of all the rescheduling, the tournament went into two extra days in order to replay the rained-out games.

Batters were somewhat handicapped by the rain-deadened ball, but not as much as the fielders were hampered by the slippery turf. The over-all scores reflected the playing conditions.

The Women's All-Navy Softball Championship was played under similar conditions and four of their games had to be postponed. The Norfolk Naval Station Waves — familiar to such playing conditions —won the title with a 5-4 victory over runner-up NORLANT, represented by the Philadelphia Naval Base.

Here's a rundown on the games played in each of the tournaments:

Men's All-Navy Softball

Winners' Bracket

First Round: NORLANT (NAS Lakehurst) defeated WESTPAC (CommSta, San Miguel, P.I.), 6-2.

Second Round: PACCOAST (NAS North Island) downed NORLANT, 12-6; while SOLANT (NAS Jacksonville) defeated LANTFLT (DESLANT), 3-1.

Third Round: PACCOAST edged SOLANT, 3-2 in 13 innings.

Losers' Bracket

First Round: LANTFLT eliminated WESTPAC, 6-2.

Second Round: LANTFLT eliminated NORLANT, 2-1.

Third Round: LANTFLT eliminated SOLANT, 8-6.

In the finals, DESLANT took both ends of a double-header from previously unbeaten NAS North Island, 3-2 and 1-0.

Women's All-Navy Softball

Winners' Bracket

First Round: PACCOAST (NAS Alameda) downed NORLANT (NavBase, Philadelphia), 6-3; while SOLANT (NavSta, Norfolk) edged WESTPAC (NavSta, Pearl Harbor) by a 2-1 margin in nine innings.

Second Round: SOLANT defeated PACCOAST, 7-6 in eight innings.

Losers' Bracket

First Round: NORLANT eliminated WESTPAC, 11-2.

Second Round: NORLANT eliminated PACCOAST, 9-6.

In the finals, the Norfolk Waves took home the bacon when they slipped past the gals from Philly with a 5-4 win.

IN SEASON — Navymen throughout the Fleet are picking up the ball again to try their skill in bowling matches.

One Hundred Fifty Awards

LTJG L. A. Clement, small arms marksmanship instructor at NAS Pensacola, Fla., has been awarded the Distinguished Pistol Shot Badge by the Chief of Naval Personnel.

HOT SHOT—LTJG L. A. Clement, receiver Navy Distinguished Pistol Shot Badge, poses with some of the 150 pistol awards he has won since 1952.

The Pistol Shot Badge is awarded to personnel who have received three Excellence-in-Competition badges as a result of placing in Fleet, Navy-wide, or National shooting competition. It is the highest shooting badge available to a Navy shooter.

LTJG Clement began his competitive shooting in the Navy in 1952 while stationed at NAS Guantanamo Bay, Cuba. During the past seven years he was won some 150 awards.

In 1957 he received a Silver Excellence-in-Competition Badge at the Atlantic Fleet championship matches and a bronze "leg" at the National matches.

During the 1958 season, Clement did not compete in the Atlantic Fleet matches. He did compete in the All-Navy and National matches, but failed to qualify for the Distinguished Pistol Shot Badge.

During the 1959 season Clement not only got his third "leg" in the Atlantic Fleet matches but went on to place in the All-Navy and National matches. In addition, he was captain of the U. S. Navy team which placed fifth at the National matches.

Navy Sports Shorts

• A three-man squad representing NAS Jacksonville swept most of the honors in the World Military Skeet Championships at Lynnhaven, Va.

Ken Pendergras of Early Warning Squadron Four, present world open champ, shot a 199x200 only to lose the open singles title to a sharp-shooting Marine, Major O. R. Davis, who blasted all 200 birds.

Team mates Bill Arthur from Light Photo Squadron 62 and Walt Browne of Early Warning Squadron Four won Class B and C singles championships, respectively, Arthur with a 99x100 and Browne with 92x100.

Pendergras and Arthur then pooled their talents to waltz off with the two-man title, posting a 199x200 mark.

• In Inter-Service tennis play for possession of the coveted Leech Cup, the Navy team made a strong bid before bowing in the finals, four matches to three, to a Marine squad which won the cup for the first time in its history.

Navy had edged the Air Force, 4-3, in first day action while the Marines routed Army, 5-2, to set

up the Navy-Marine title clash.

Navy's Seth Peterson and John Lesch won singles matches, and the Jerry Glade-King Van Norstrand and Peterson-Dale Junta duos triumphed in doubles play in the squeaker over the Air Force.

Against the Marines, though, only Lesch was able to eapture a singles test, while the Junta-Peterson and Lesch-Mike Franks combines won doubles matches.

It's Like Eating on Shangri La

Meals for enlisted men aboard USS *Shangri La* (CVA 38) are now served 21 hours each day while at sea. On board most ships, meals are served only about six hours a day, or two hours for each meal.

CDR William W. Hobgood, Supply Officer aboard, claims that the ship saves 315 man days each day by abolishing meal lines. Here's how he figures: Previously, each man averaged one hour a day standing in line for his meals. Take that time saved (one hour a day) and multiply it by the approximate number of men aboard (2526), and then divide that sum by eight hours (a normal work day) and you get slightly over 315 man days saved each day.

"The new system also improves the efficiency of the ship," CDR Hobgood boasted. "Men may now eat whenever it least interferes with their work schedule. They are no longer forced to eat only at a fixed time."

The quality of the food has also improved. It is no longer necessary to prepare large amounts of food at one time. Smaller quantities can be prepared, enabling the cooks to control the quality of each serving more carefully.

Bakery goods are fresher, because of more frequent baking. Drinking cups have time to cool before they are used constituting another saving in the amount of ice needed.

"The morale of the crew has improved," CDR Hobgood emphasized. "Previously, men would skip a meal rather than wait in line for an hour. The new system keeps everyone well-fed and happy."

The cost of round-the-clock feeding is little more than under the old procedure. *Shangri La* is still able to feed within the ration allowance for each man.

Even the mess cooks are happy with the new set-up. They have half as much area to keep clean.

SIDELINE STRATEGY

ON SATURDAY, 26 Sep 1959, the Navy-Marine Corps Memorial Stadium at Annapolis, Md., was officially dedicated. The new 30,000-seat stadium is not just another football field—it's this country's only living memorial to the Navy and Marine Corps.

The Navy and Marine Corps Memorial Stadium was named for and dedicated to "all men and women who have served, and will serve, their country with honor, distinction and loyalty in the Navy and Marine Corps."

The idea of a stadium honoring their comrades in arms won strong backing from Marines and Navymen. The stadium was built—not as a result of Congressional appropriations — but through the generous contributions of active and retired Navy and Marine Corps officers, enlisted men, their families and friends.

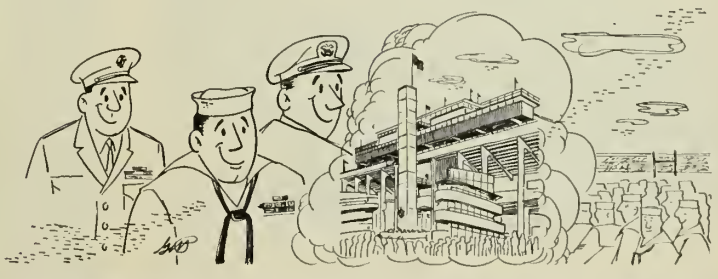
In an organized world-wide fund raising campaign, sailors, Marines and friends donated about $1,250,000 while the Naval Academy and its Athletic Association contributed $1,200,000 more. All in all, this was about $250,000 more than was required to build the stadium.

These extra funds will be used for future improvements and upkeep of the new stadium.

The new Navy-Marine Corps Memorial Stadium, which, for the past 20 years appeared to be no more than just another pipe dream, is now a permanent Naval Academy landmark. To date, about 350 memorial plaques and 6000 memorial chairs have been dedicated to Navy and Marine Corps men and women within this "living memorial."

Many of the individuals who were responsible for making it a reality were on hand to see the stadium officially dedicated minutes before the opening kick-off of the Naval Academy's traditional homecoming football game. There were—among the 30,000 spectators — the Academy's alumni, crews of Fleet units who visited Annapolis for the occasion, CNO and SecNav, the retired CPO who had contributed $1200 from his Navy savings, and scads of neighborhood kids who had collected pennies and donated them to the Stadium Fund.

In addition to a new stadium, the Naval Academy has a new director of athletics, a new football coach, and a new mascot. CAPT Asbury (Red) Coward, USN, has relieved CAPT Slade Cutter, USN, who has served as the Academy's Director of Athletics since August 1957. The new head grid coach is 32-year old Wayne Hardin. He has served as the backfield coach under his predecessor (Eddie Erdelatz) since 1955. And then there's the Blue and Gold's new gridiron mascot—Bill XV —reported to be rougher and tougher than Bill XIV, who recently passed on to greener pastures. —HGB, JOC, USN.



SERVICESCOPE

Brief news items about other branches of the armed services.

THE ARMY RECENTLY AWARDED A CONTRACT for development and construction of a new type of transport helicopter.

Due for delivery late next year, the new aircraft will feature two turbine engines and a rear ramp which will speed up loading and unloading of troops and cargo. Designed to replace the Army's existing stock of obsolescent piston-powered transport helicopters, the new 'copter will be called the *Chinook*, in honor of the American Indian tribe of that name.

It is expected to carry up to 33 passengers or three tons of cargo, at a cruising speed of more than 125 knots.

★ ★ ★

THE AIR FORCE EXPECTS to obtain more durable tires for its supersonic aircraft as a result of studies being made with a new high-speed tire tester at Andrews AFB in Maryland, on the outskirts of Washington, D.C.

Built for the Air Research and Development Command, the tire tester is being used to study physical deterioration and heat fatigue of tires during high-speed take-offs and landings.

The tire-testing facility simulates take-off and landing conditions of supersonic aircraft. During the dry-run take-offs, airmen can "floor the pedal" on the new tester, which is capable of acceleration from a standstill to 300 miles per hour within 20 seconds. The machine also simulates landing deceleration from 300 mph to zero speed at 24 feet per second.

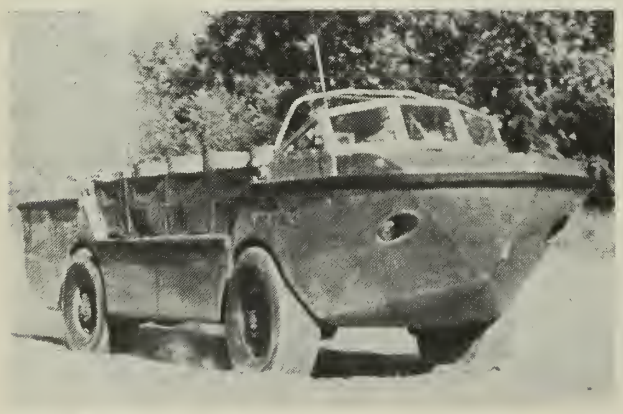
★ ★ ★

A NEW LIGHTWEIGHT AMPHIBIOUS VEHICLE—designated LARC-5—has been demonstrated by the Army at Ft. Custer, Mich.

The LARC-5 (lighter, amphibious, resupply, cargo) is made of aluminum and features side gates for rapid loading and unloading. It has a five-ton capacity.

On land, the new amphibian's speed is between 30 to 35 miles per hour. In the water it can travel about eight knots. It is powered by a 270-horsepower engine.

Designed to replace the two-and-one-half-ton DUKW of WW II fame, the LARC-5 features a marine-hull design which is more seaworthy than the Army's earlier land-sea vehicles. It is capable of operating in surf.



AMPHIBIAN—New lightweight, all aluminum LARC-5 is designed to replace the Army's DUKWs of WW II.

UP SHOT—*Red Eye* new portable shoulder-fired guided missile is being developed by Army to shoot down planes.

Four large-diameter low-pressure tires absorb road shock and provide exceptional mobility in sand, mud and cross-country operations.

The LARC-5 rounds out the Army's family of new light craft and amphibious vehicles engineered to increase the "over the beach" supply effort. The Army's other new vehicles include the 15-ton capacity LARC-15, and the BARC, which has a 60-ton capacity.

★ ★ ★

THE AIR FORCE CAMBRIDGE RESEARCH CENTER at Bedford, Mass., has devised a project for finding the density of the atmosphere 300 miles above the earth.

It calls for the use of an instrument-packed plastic balloon to be ejected from a two-stage rocket. The launching vehicle's first stage will be a Navy *Aerobee* research rocket, while the second will be a modified version of the Navy's solid-propellant *Sparrow* missile.

The rocket's 18-pound payload is a plastic sphere that balloons to nine feet in diameter when ejected and inflated. Radio equipment and instruments for measuring density will be contained in a hollow plastic strut within the balloon.

This payload will be released from the rocket at about 60 miles up. Then, during its seven-or eight-minute free flight, it will follow the trajectory of the rocket for another 240 miles.

★ ★ ★

THE ARMY is evaluating a radically new type parachute with rotating sail-like blades, and has put into use a new parachute harness assembly which should make jumping safer for pilots and paratroopers.

The new chute—also being tested by the Navy and Marine Corps—consists of four nylon panels connected at their vortex by shroud lines leading to a ballbearing swivel. In use, the four cloth blades auto-rotate like the rotors of a helicopter.

The Army is particularly interested in the Vortex Ring Chute because it collapses as soon as a paratrooper alights on the ground. This feature would eliminate the danger of dragging.

In a number of tests conducted by the Army Quartermaster Research Engineering Command at Natick, Mass., the new chute proved to be "very encouraging."

Other features of the Vortex Chute that appeal to the Army are its inherent stability during descent, its

low shock effect upon opening and the fact that it has little tendency to glide or swing from side to side.

Because it collapses upon ground contact, the Army feels that troopers will be able to slip out of the harness more quickly and be ready for immediate combat. The fact that the chute collapses readily will also be of great advantage to pilots forced to eject over the water.

Along this same line is the Army's new harness assembly which incorporates a canopy release designed for standard Army troop-type parachutes now in use. This new assembly will prevent paratroopers from being dragged by surface winds after landing.

The canopy release is a safety device to be used only after landing when there is danger that the paratrooper will be dragged by surface winds. It enables the trooper to free the canopy from the parachute harness in about six seconds. Normally, when low surface winds prevail, a paratrooper sheds his chute assembly by means of a conventional harness-release box.

The Navy is evaluating the new Vortex Ring Chute in a series of studies on the relative rates of descent for varying weights. These tests are being conducted at the Naval Parachute Unit, El Centro, Calif.

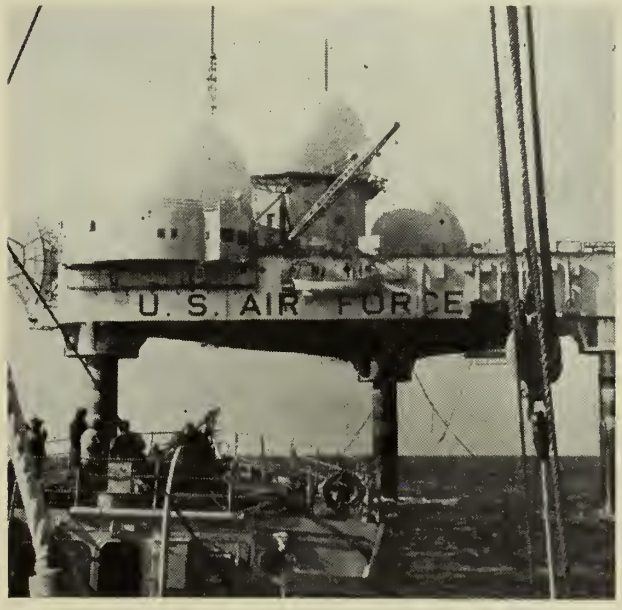
The Marine Corps has already made tests at its Development Center, Quantico, Va. The new chute has possible use for delivering food and ammunition to combatant Marines from high-speed jet aircraft.

★ ★ ★

A ROCKET-PROPELLED SLED is believed to have set a new speed record for a two-rail vehicle when it zoomed down its track at 2075 miles per hour at the Air Force Test Center, Edwards AFB, Calif.

Another test sled, at the Air Research and Development Command's Missile Development Center in New Mexico, reached a speed of 2850 mph. This, however, was a single or monorail sled.

The Air Force uses these jet propelled sleds to study basic problems in attaining high speeds. Instead of wheels, the two rail sleds use slippers which grip the railheads and slide along the track. At supersonic velocities, sliding friction causes the slipper surface contracting the rail to melt and wear rapidly.



SEA SERVICE—MSTS supply ship USNS AKL 17 delivers supplies to Texas Tower, radar station at Georges Bank.

THEY DEW IT—Aerial photo shows USAF manned Dew Line station that is part of our northern defense.

To overcome this, engineers built the sled as two vertical wedges, one over each of the track rails. They were joined together by two cross members.

Using a water brake to bring the sled to a halt, a scoop is incorporated in the rear cross section member. The scoop picks up water from a trough between the rails and passes it through a duct to provide water jet retarding action. This reduces both areodynamic drag and weight, permitting higher performance.

★ ★ ★

THE "TACTICAL SUSTAINER MOTOR" for the *Nike-Zeus* anti-missile missile which the Army is developing has been successfully static-tested.

This new solid-fuel rocket motor consists of "an unusually efficient motor case with thin walls, special high-energy propellants, and a unique plastic nozzle that is able to withstand thousands of degrees of heat with perfect results."

When it becomes operational, this motor will drive the *Nike-Zeus* missile killer to its target at speeds up to 15,000 miles per hour.

The Army's *Nike-Zeus* missile is the only active system under development that is designed to destroy enemy ICBMs. Actual test firings are expected soon.

★ ★ ★

A SATELLITE TRACKING STATION is nearing completion at New Boston, N.H., and a contract has been awarded for another to be built at Donnelly Flats, Alaska.

These space-age facilities—similar in design—will support Department of Defense space projects. They will track, determine and predict orbits of satellites, as well as receive telemetry information from the vehicles and process this data through computers.

The New Boston site is a former Air Force bombing range located about 60 miles north of Boston, Mass. When completed in the near future, it will consist of eight buildings and will be staffed by approximately 350 Air Force personnel.

The new tracking station being built at Donnelly Flats will be on the Fort Greeley military reservation near Fairbanks. It will be manned by about 200 persons.

THE WORD

Frank, Authentic Advance Information On Policy—Straight From Headquarters

• **LATEST UNIFORM CHANGES** — Distribution of a revised edition of *U. S. Navy Uniform Regulations* (NavPers 15665, Rev. 59) has been completed. Several changes which will affect almost all officers and enlisted men and women have been made.

Besides uniforms, the general format and method of presentation of *Uniform Regulations* have been changed.

Illustrations of uniforms are grouped in Appendix A by type of uniform rather than by category of personnel. In this way, you can see at a glance just how all categories of personnel should look when in a particular Uniform of the Day. All the insignia illustrations appear in Appendix B.

Here are the uniform changes that are included in the latest edition of *Uniform Regulations.*

Officers (Chapter 1):

• Wearing of tan gloves with the Service Dress Khaki uniform is discontinued.

• Authority to wear a white tropical helmet with the Service Dress White uniform is discontinued.

• Authority to wear a black bow tie and ribbons with evening dress as a dinner dress uniform is discontinued.

Women Officers (Chapter 2):

• The green jacket becomes a required item for flight nurses. The khaki jacket for flight nurses is eliminated.

• The cape is changed to an optional item for nurses.

• The skirt of the exercise suit is eliminated.

• The turban is eliminated as an article of uniform.

Enlisted Men, below CPO grade (Chapter 7):

• Dress and Undress Uniforms have been redesignated as Service Dress or Working Uniform as appropriate.

• The requirement for multiple ownership markings on articles of clothing is eliminated. (This means that an article of clothing will no longer have to be stenciled in more than one place.)

Enlisted Women (Chapter 8):

• The skirt of the exercise suit is eliminated.

• The turban is also eliminated.

Awards (Chapter 10):

• Merchant Marine decorations are given the status of non-military U.S. decorations.

• The wearing of ribbons and/or badges when miniature medals are prescribed is not authorized.

• United Nations Service Medal and Philippine Service Ribbons are given the status of non-U.S. service awards.

One change that didn't get into the new edition is one concerning officers. It prescribes a gold cummerbund for wear by officers with the Dinner Dress Blue jacket uniform.

The new regulations state that the new women's Service Dress, Light Blue uniform may be worn as soon as available. But a hitch has come up here. Owing to manufacturing difficulties, sufficient rating badges will not be available for this uniform for some time. This problem was taken care of by BuPers Notice 1020 of 21 Jul 1959 which says that enlisted women who are able to purchase the new Service Dress Light Blue uniform, but are unable to get the appropriate sleeve insignia may wear the new uniform without insignia until 1 Jan 1960. By then a sufficient supply should be available to everyone.

The latest edition of *Uniform Regulations,* which includes the above changes, is now being distributed to the Fleet. Personal copies, however, may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C. at a cost of $1.50 each.

• **ONR REPORTS ON FILM**—Quarterly, the Chief of Naval Research produces for CNO a Briefing Report of current developments in the field of naval research. The 16-mm. color motion picture report, which is classified, is distributed to all major Fleet commanders and other commands with interest in research and development.

These films are made to keep personnel abreast of current research projects and to broaden their professional knowledge in certain fields.

It seems, however, that the existence of NARAD Reports is not yet known throughout the Fleet. The classification, which periodically is Secret-Restricted Data, appears to deter some re-distribution and many specific showings.

Each report contains six or seven subjects selected from the current Navy-wide research and development programs. Projects such as new aircraft, missiles, submarines, ships and weapons are included in these Reports.

The presentation is by a combination of art, animation, sound and live-action footage. Slanted to technical and semi-technical audiences, they present complex R & D projects with clarity.

The current Report—CNO 2-59—is classified SECRET—RESTRICT-

"LETS TALK TURKEY — Nine other Navymen are waiting to read this issue . . . so pass this copy along."

ED DATA and contains the following subjects: Naval Tactical Data System (NTDS), *Sparrow III*, Demand Thrust Rocket Engine, *Bullpup*, XM-70 Close Support Artillery Weapon System, Body Armor, *Redeye* Missile System, and *Polaris*.

Further information on this program is available from the Chief of Naval Research, Code 110, Washington 25, D.C.

• **SEAVEY SEGMENT I**—Navymen in 22 ratings making up Seavey Segment One (1960) will start getting orders to shore duty in Feb 1960.

BuPers Notice 1306 of 2 Sep 1959 established sea duty commencement cut-off dates for those ratings.

Sea tour commencement cut-off dates for Segment 1-60 are:

RATE	DATE
BMC	Dec 57
BM1	Dec 55
BM2	May 54
BM3, SN	Oct 53
QMC	Jun 58
QM1	Sep 56
QM2	Nov 55
QM3, SN	Sep 55
SMC	Sep 57
SM1, 2, 3, SN	Jun 55
RDC	Jun 58
RD1, 2	Dec 56
RD3, SN	Sep 56
SOC, 1, 2, 3, SN	Jun 57
TMC, 1	Jun 58
TM2	Jun 56
TM3, SN	Dec 55
GMC	Mar 57
GM1, 2	Dec 54
GM3, SN	Sep 54
NWC, 1	Dec 58
NW2, 3, SN	Jun 57
FTC	Mar 57
FT1, 2, 3, SN	Jun 56
GSC, 1, 2, 3, SN	Dec 58
MNC, 1, 2, 3, SN	Dec 58
ETC, 1	Dec 58
ET2, 3, SN	Jun 58
IMC, 1, 2	Dec 57
TM3, SN	Dec 56
OMC, 1, 2, 3, SN	Dec 57
RMC, 1, 2, 3, SN	Mar 58
YNC, 1, 2, 3, SN	Jun 58
PNC, 1, 2, 3, SN	Jun 58
SKC, 1	Dec 58
SK2, 3, SN	Sep 58
DKC, 1, 2, 3, SN	Dec 58
JOC, 1, 2, 3, SN	Dec 58
LIC, 1	Jun 58
LI2	Mar 58
LI3, SN	Dec 57
DMC, 1, 2, 3, SN	Dec 58

• **NAVAL UNIFORM SHOP** — Beginning 1 Jan 1960, custom tailoring service for naval officers and CPOs will be as close to you as the nearest major Navy Exchange store.

Effective that date the Naval Uniform Shop, heretofore operated as a separate activity, will become a part of the world-wide Navy Exchange system.

This integration will provide officers and CPOs with one source for both custom-tailored and ready-made uniforms.

Here's the way it will work. Suppose an officer or CPO stationed at NTC San Diego wants a set of custom-tailored blues. He'll drop in to the uniform shop at the Navy Exchange store there, and have his measurements taken. The measurements, along with his order, will be sent to the parent uniform shop in Brooklyn, N. Y. Then, when the finished uniform is received in San Diego, the Exchange uniform shop there will provide final fitting services.

Centralized control of procurement and lower inventories made possible by the new system should result in substantial savings, which will be passed on to customers.

• **COAST GUARD CADETS** — The next annual nation-wide competitive examination for appointment to the Coast Guard Academy will be held on 23 and 24 Feb 1960.

Navymen interested in competing may obtain booklets describing the Academy and its entrance requirements through individual requests addressed to the Commandant (PTP-2), U. S. Coast Guard, Washington 25, D. C. Application forms are provided in the booklets.

Applications must be postmarked not later than 15 Jan 1960. However, because of the time element involved, candidates stationed outside the continental United States are urged to submit their applications not later than 15 Dec 1959.

To meet the basic eligibility requirements a candidate must:

Have reached his 17th, but not his 22nd birthday by 1 Jul 1960.

Be a graduate of an accredited high school.

Be unmarried and never have been married.

Have these credits, either in high school or college (each credit represents one year's work): Algebra—2; Plane Geometry — 1; English — 3; Optional Credits — 9.

Be at least five-feet-four-inches, and not more than six-feet-six-inches in height; have 20/20 vision in each eye without correction; and be in excellent physical condition.

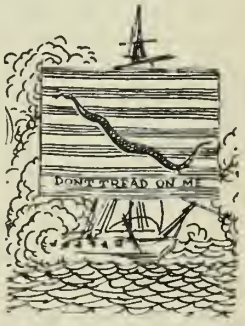
QUIZ AWEIGH

This month's Quiz Away is designed to see if you have been reading ALL HANDS. If you have, and have a good memory, you'll get a 4.0. The answer to each of the following questions has been published in one of the last five issues. See how well you can do.

1. International traffic signs are used throughout Europe. Below is one you should know. What does it signify? (a) hill ahead, (b) caution, (c) no speed limit, drive at safe speed, (d) dead end road.

2. The first of nine authorized Fleet Ballistic Missile submarines was launched in June. It was (a) *Abraham Lincoln*, (b) *Skipjack*, (c) *Triton*, (d) George *Washington*.

3. The flag shown below was the first (a) U.S. Navy Jack, (b) U.S. Navy Ensign, (c) official U.S. Navy flag, (d) personal flag, belonging to John Paul Jones.



4. Only one flag or pennant can fly above the flag of the United States. It is (a) United Nations flag, (b) church pennant, (c) admiral's personal flag, (d) national flag of a visiting dignitary.

5. What percentage of Naval Aviation Cadets are former enlisted men: (a) 5, (b) 10, (c) 20, (d) 50.

Check your memory on page 54.

THE BULLETIN BOARD

New Streamlined Format For Officers' Orders Is Now in Effect

Officers' permanent change of duty orders issued by the Chief of Naval Personnel have undergone a face lifting. Use of a new, modern format began on 1 October.

The earlier practice spelled out every order in detail. This often ran to two pages. Such phrases as "When directed by your commanding officer on or about . . ." and "Upon completion of this temporary duty and when directed by your . . ." was often repeated several times in the old orders.

Orders written in the new form take about one-half page and three paragraphs. There is no duplication.

To accompany the new orders is a sheet which contains often used phrases and paragraphs. Rather than repeat the necessary paragraphs in each set of orders, only a number is written in the orders to denote a certain paragraph or phrase on the companion sheet. An officer can read in the information from there.

Here is an example of the change:

- In the new orders, it says "Item 3—30 Nov 1961."
- In the old orders it would have said: "Execution of these orders is contingent upon agreement to extend active duty until 30 Nov 1961 (This date is left blank on the companion sheet for the new orders). Submit agreement to the Chief of Naval Personnel prior to detachment. If agreement is not received, compliance with these orders shall be construed as an agreement on your part to remain on active duty until the above date. If extension is not desired, inform the Chief of Naval Personnel by message."

This paragraph is listed on the preprinted sheet that now accompanies an officers orders as simply "Item 3."

As you can see—and this is only one paragraph — considerable time and effort is saved in the new orders. Field activities have been directed not to use the new format until BuPers Inst. 2340.1 has been changed.

Together with the new format comes another time-saving change. From now on a copy of officer's orders will go only to the command to which an officer is reporting, the immediate superior of that command, the technical bureau for restricted line and staff corps officers, and other commands mentioned in the body of the orders.

Any other command that needs a copy of orders on an officer reporting to a subordinate command must request it from the Bureau and explain why it is needed and why the information cannot be obtained from any other source, such as the daily officers' orders issued report, or officer distribution control report. As of 1 October, all prior requests for information copies of officers orders were cancelled.

For complete information about the new changes, see BuPers Notice 1321 of 28 Aug 1959.

All Navy Cartoon Contest
D. R. Stoner, PN3, USN

"Sinknovich, I though you were told to leave your lucky piece in the dressing room."

David J. Majchrzak, DN, USN

"He plans on making chief."

NavCad Program Is Open To Active Duty Personnel, Regulars, Reserves May Qualify

The Naval Aviation Cadet Program may be your chance to trade that blue jumper for gold braid and gold wings—providing you've got what it takes to be a Naval Aviator.

You are eligible to apply for the program if you are an enlisted Navyman (either Regular or Reserve) now serving on active duty; have at least one year of active duty immediately preceding application and meet these requirements:

- Citizenship—Be a male citizen of the United States.
- Education—Have 60 semester hours or 90 quarter hours of unduplicated college work at an accredited junior college, college or university — *or* — have a minimum combined GCT/ARI score of 120 and a MECH score of 58, plus either 30 semester hours (45 quarter hours) of unduplicated college work at an accredited school, or have successfully completed the USAFI General Education Development Test, one year college level.
- Age—Be at least 18 and under 25 years of age on the date the application is submitted.
- Sign a contract for NavCad student (NavPers 275), which requires three and one-half years' active duty after completion of flight training. (If you are under 21, the consent portion of this contract must be executed by your parent or guardian.)
- Be unmarried and agree to remain unmarried until commissioned.
- Attain a score of at least 3 on the Aviation Qualification Test (AQT) and at least 5 on the Flight Aptitude Rating Test (FAR).
- Be physically qualified and aeronautically adapted for the actual control of aircraft in accordance with Chapter 15 of the *Manual of the Medical Department*, U. S. Navy.
- Be strongly motivated to fly, and possess the attributes of character, temperament and aptitude for service required of a commissioned officer.

Before your application will be forwarded to the Chief of Naval

Personnel, you will be interviewed by a board consisting of three line officers, lieutenant or above (one of whom will be a naval aviator, if possible), concerning your education, general aptitude, motivation for flying and military life and other pertinent considerations. This board will make a recommendation to your commanding officer regarding your potential as a commissioned officer and naval aviator, and each board member will record his impressions of you on an Interviewer's Appraisal Sheet (NavPers 958).

Your CO will then review your application and interview you personally. On your application form (NavPers 953, Rev. 4-56) he will make specific statements as to whether or not you appear to be fully qualified and seem to have the potential for satisfactory service as a commissioned officer. After that, your application and all the necessary supporting documents listed in BuPers Inst. 1120.20B is forwarded to the Chief of Naval Personnel.

Applications will be considered by an informal board of officers in the Bureau of Naval Personnel. The board will select those candidates who appear to be the best qualified in all respects to meet input quotas for each class. Navymen on active duty will compete against applicants from civilian life for selection. As soon as possible after a decision has been made, you will get the word on whether or not you have been selected. If you are, you will be given a routine physical recheck, stressing the basic requirements of the flight physical examination, before you are transferred.

Selected applicants will be ordered to report to the Chief of Naval Air Basic Training. NAS Pensacola, Fla. Upon reporting there you will be transferred to the special enlisted grade of Naval Aviation Cadet, USN, or USNR-R, as applicable.

If, at any time before you are ordered to Pensacola, you decide you no longer want to be considered for flight training, you must submit to the Chief of Naval Personnel (Attn: Pers-B624) a written request to withdraw your application. Such a request will be approved without prejudice.

NavCads who violate their contract by getting married before they receive a commission, or who fail the flight training program, will be separated from the program and, if liable for further active duty, will be reassigned by BuPers.

Both Regulars and Reserves who are selected must agree to extend their current enlistments so that they will have at least three years' obligated service remaining at the time they enter flight training.

The training takes about 18 months. When you have successfully completed it, you will be appointed to the grade of ensign in the Naval Reserve.

Upon fulfillment of your initial active duty obligation, you will be released to inactive duty, unless you request an extension for approval by the Chief of Naval Personnel.

You may also request augmentation to the Regular Navy. If you are selected, you will be appointed in the Regular Navy with the same date of rank that you held in the Reserve.

Active-duty enlisted men (both Regular and Reserve) will find complete details on applying for the NavCad Program in BuPers Inst. 1120.20B.

Inactive Reservists cannot apply under that instruction. However, they may do so under Recruiting Service Inst. 402.1, covering requirements for civilian applicants.

WHAT'S IN A NAME

Parachute Plaques

The Caterpillar Club is one of aviation's more exclusive organizations. Only men who have been forced to parachute from an airplane to save their lives may be members.

When the idea of the club was conceived in October 1922, someone suggested that the insigne of the organization be a caterpillar lowering itself to earth on a silk thread. That seemed appropriate since both the canopy and lines of the parachute were then made of silk.

(Another organization that has similar entrance qualifications is the Squatters Club. To join this group you must be a United Nations airman who has been forced down at sea.)

Of course, Navy mechanics do everything they can to prevent a pilot's being forced to ditch his plane—but their work is done before the plane leaves the ground. Once airborne, if the plane gets in trouble, the mechanic can do nothing to help in the emergency.

With applicants for the Caterpillar Club, however, the story has a different twist. Navy parachute riggers also do their work on the ground before a plane takes off, but their work is most fully appreciated when a flight goes irretrievably wrong.

These parachute riggers fully realize the importance of their work because all who complete the course at the Parachute Riggers School at Lakehurst, N. J., must make at least one jump with a chute they have packed.

The nine rated riggers at Whiting Field, near Pensacola, Fla., and the seven airmen working under their supervision, are typical examples of Navy riggers at work. This small crew accounts for the inspection, repair, cleaning, and repacking of the approximately 800 parachutes in use there.

Eight of those 800 parachutes have probably saved the lives of their wearers during the past 12 months.

Since 26 Sep 1958, eight successful bailouts have been made by six Whiting flight students and two instructors. Four of these were made by students flying solo hops.

During this 12-month period, over 150,000 hours have been logged while teaching student aviators to fly a plane, yet not a single fatality has occurred because of a faulty parachute.

Several Whiting riggers have plaques which cite the individual for packing the chute which saved a particular pilot's life. These plaques are awarded by a civilian parachute company after proper certification of the incident by Whiting Field.

Several of these plaques have been formally presented by the pilots whose life the rigger saved. Many times, however, the surviving pilot is a student who has moved on to another field for more training. In this event, the plaque is presented by a member of the Caterpillar Club.

Demonstration Team Is Organized To Augment Training of Navy Stewards

If you have noticed improved service at the BOQ lately, it might mean your base has been visited by a newly formed demonstration team of Navy stewards.

Headed by LTJG Norman Newcomb, SC, USN, the team includes three stewards, S. B. Bennett, SDCS, Jesse Owens, SD1, and William Shannon, SD1. They travel, by invitation only, to various bases in the United States to show Navy stewards how to do their work in a better, more efficient manner. The team, formed by the Chief of Naval Personnel, is home-based at the Patuxent River, Md., Mess Administrator's School.

The mission of the team is to standardize and teach modern methods to achieve a higher standard of service in messing and quarters departments of Officers Messes closed. They hope to visit nearly all large Navy installations in the United States and overseas. Currently the team is visiting East Coast bases.

According to LTJG Newcomb, the steward rate will soon encompass new skills such as bookkeeping, storekeeping and purchasing.

Aboard the bases, members of the team hold classroom lectures as well as on-the-job training. In addition to instruction by the team, local senior POs are given material they can use to continue the training program after the demonstration team moves on.

Here is the training procedure used by the BuPers team. First, they observe current procedures at the local mess. Then, after noting improvements that should be made, they talk to the mess treasurer or manager. If he agrees, the team proceeds to instruct the stewards in the new methods.

LTJG Newcomb explained the need for the team this way: "There is no formal schooling for this type of work in the Navy. Stewards learn most about their rating through on-the-job-training.

"The team's mission has been designed to supplement this training, and to improve the techniques used in Officers' Mess operations throughout the Navy.

"We try to bring the steward personnel up to date with the latest ideas for improving operation of the messes."

Aside from the primary mission, the team also provides the men with the latest information about what is being done at the Bureau level to improve their rating.

Part of the program includes a short return visit after about a year to see how the newer methods are working.

Temporary Appointments Of 42 New WOs Announced

Thirteen first class and 29 chief petty officers have been given temporary appointments to Warrant Officer, W-1.

These appointments were from an eligibility list established by a selection board which convened in the Bureau of Naval Personnel in Feb 59.

The eligibility list from which this group was appointed is the last for WO. After this fiscal year, the only input into the WO program will be twice passed-over LDOs who are allowed by law to revert to permanent Warrant Officer. The Warrant Officer program is being phased out by normal attrition. Their billets will be filled by master chief petty officers and limited duty officers.

Regular Navy appointments made this time were broken down as follows: Boatswain (7132), seven; Aviation Ordnance Technician (7212), one; Surface Ordnance Technician (7232), seven; Ordnance Control Technician (7242), one; Aviation Maintenance Technician (7412), one; Machinist (7432), five; Aviation Electronics Technician (7612), two; Electronics Technician (7662), three; Ship Repair Technician (7742), three; Musician (7852), one; Supply Clerk (7982), eight; Aerographer (8212), two; Civil Engineer Corps (8492), one.

New Courses for Machinery Repairman, Guided Missileman

Two new Enlisted Correspondence Courses are now available, and two others have been discontinued by Correspondence Course Center.

Enlisted Correspondence Courses for active duty personnel will be administered (with certain exceptions) by your local command instead of by the Center.

Your division officer will advise you whether the course for which you have applied is suitable to your rate and to the training program you are following. If it is, he will see that your application (NavPers 231) is forwarded to the Correspondence Course Center.

Personnel on inactive duty will have courses handled by the Center.

NEW COURSE

Title	*NavPers Number*
* Machinery Repairman 1 and Guided Missileman 3 and 2	91509-1 91360

* This course may be taken for repeat Naval Reserve credit.

DISCONTINUED COURSES

Title	*NavPers Number*
Machinery Repairman 1	NP 91508-A
Machinery Repairman C	NP 91509-A

All Navy Cartoon Contest
William Roger Maul, CT1

". . . C'mon, c'mon . . . Put em up, Mac . . . You don't think I've got a liberty card? . . . Nobody says that to ole Rocky . . . !"

All Navy Cartoon Contest
William R. Maul, CT1, USN

"ID card . . . Yes, Yes, I've got it . . . ID card . . . Yep, I've got it somewhere . . . Good ole ID card . . . I know I had it . . . Now where is that lil' ID card? . . ."

List of New Motion Pictures Scheduled for Distribution To Ships and Overseas Bases

The latest list of 16-mm. feature movies available from the Navy Motion Picture Service, Bldg. 311, Naval Base, Brooklyn 1, N. Y., is published here for the convenience of ships and overseas bases. The title of each picture is followed by the program number.

Those in color are designated by (C) and those in wide-screen processes by (WS). Distribution began in September.

These films are leased from the movie industry and distributed free to ships and most overseas activities under the Fleet Motion Picture Plan.

The World, the Flesh and the Devil (1367) (WS): Drama; Harry Belafonte, Inger Stevens.

No Name on the Bullet (1368) (WS): Western; Audie Murphy, Charles Drake.

The Rabbit Trap (1369): Drama; Ernest Borgnine, David Brian.

Thunder in the Sun (1370) (C): Western; Susan Hayward, Jeff Chandler.

The Gunfight at Dodge City (1371) (WS) (C): Western; Joel McCrea, Julie Adams.

Son of Robin Hood (1372) (WS) (C): Melodrama; Al Hedison, June Laverick.

First Man Into Space (1373): Melodrama; Marshall Thompson, Maria Landi.

Attila (1374) (C); Melodrama; Anthony Quinn, Sophia Loren.

Ask Any Girl (1375) (WS) (C): Comedy; David Niven, Shirley MacLaine.

Here Come the Jets (1376) (WS): Melodrama; Steve Brodie, Lyn Thomas.

The Screaming Skull (1377): Melodrama; John Hudson, Peggy Weber.

Missiles From Hell (1378): Melodrama; Michael Rennie, Patricia Medina.

Green Mansions (1379) (WS) (C): Drama; Audrey Hepburn, Anthony Perkins.

The Sad Horse (1380) (WS) (C): Drama; David Ladd, Chill Wills.

The Four Skulls of Jonathan Drake (1381): Melodrama; Eduard Franz, Valerie French.

Teenagers From Outer Space (1382): Melodrama; David Love, Dawn Anderson.

The Diary of Anne Frank (1383) (WS): Drama; Millie Perkins, Joseph Schildkraut.

The Mysterians (1384) (WS): Science-Fiction; Japanese Cast.

Buchanan Rides Alone (1385) (C): Western; Randolph Scott, Craig Stevens.

The Scapegoat (1386): Drama; Bette Davis, Alec Guiness.

New Look for CPO Mess At Gitmo and Brunswick

From Maine to Guantanamo Bay, Cuba, there's a new look added to the CPO Mess.

At NAS Brunswick, Me., the chiefs, after putting up with small, overcrowded facilities for years, now have a large modern eating facility and social center.

The new ultra-modern brick meeting place is appropriately named and decorated, with a theme centered around the flying Navy. It contains a "Flight Deck" where the bar and game room is located.

Next to this area is the "Hangar Deck" which is the mess ballroom. It is large enough for dinner parties and entertainment, as well as for dancing.

The Brunswick CPO mess also features a snack bar and a large, window-cased dining room.

Meanwhile, down at Gitmo, the CPO Mess (Open) in the Seabee Area, also had its face lifted. Painters, carpenters and draftsmen from Mobile Construction Battalion One have given the Mess a typical CB once-over. They have redecorated the interior and installed a new plywood overhead with a drop ceiling.

The exterior of the "Fouled Anchor Club" has also been completely repainted and the surrounding grounds have been landscaped.

At Guantanamo Bay, the CBs looked after the other white hats too. They converted the Enlisted Men's Lounge from "just another quonset hut" to a modern comfortable center.

The enlisted lounge has been refinished and new lighting fixtures have been installed. Running the length of the lounge is a built-in writing table. The lounge is also furnished with comfortable couches, chairs and reading material.

HERE'S YOUR NAVY

YFP 10, a U. S. Navy power plant barge that can produce enough electric power for a city the size of Ithaca, N. Y., is berthed at Thule, Greenland. She produces electrical power for the Ballistic Missile Early Warning System (BMEWS) installation there.

Besides this primary job, however, the barge supplements the power supply for the Base at Thule. But just being in this cold north country doesn't tell the entire story of this floating power plant.

The 16-day sea trip that took her to Greenland was an adventure in itself. *YFP 10*, with all her power-producing ability, was not self-propelled. That meant a long, dangerous, 3000-mile tow job from Hoboken, N. J.

To do the towing, MSTS hired the 127-foot sea-going tug Edmond J. Moran.

The U. S. Coast Guard Cutter Eastwind agreed to meet the two ships at

the entrance to Melville Bay and precede them to Thule.

It looked like an adventurous and possibly dangerous assignment. *YFP 10*, however, was destined for something better than had been expected.

First of all, the normally hazardous trek north was not hazardous at all. The often rough seas were calm making sailing smooth. Also there were few operational difficulties.

But Melville Bay still lay ahead. The normally ice-filled waters promised danger to the ships.

But there again were surprises—pleasant ones. The Bay was free of ice, and when the tug Moran met Eastwind ahead of schedule, they proceeded toward Thule.

At the very end of the trip, low tides and poor visibility prevented the 338-foot, 5000-ton barge from entering her final berth which had been designed to prevent damage from winter ice. She was anchored in North Star Bay for a short time.

A little later, when conditions were more suitable, two harbor tugs maneuvered the barge into the final berthing area.

The power barge, which is the only one of its type in existence, has 40 men assigned.

Here's What the New Enlisted Rating Structure Looks Like

As you've probably heard by now, the Navy is in the midst of a conversion job on its enlisted rating structure.

Behind this move are such factors as the increasing complexity of weapons and equipment, the large number of Reserves and one-enlistment personnel on active duty, and the need for a structure which can be used in both peacetime and wartime.

Under the new structure the system is the same for both Regulars and Reserves. In the upper pay grades the emphasis is being placed on broad qualifications wherever possible; however, some ratings are being separated into specialized branches to allow for more effective use of the Navy's manpower.

As in the "old" (1952) structure, under which about half the ratings still come, the new structure has three classifications of ratings. These are the General Rating (GR), the Service Rating (SR) and the Emergency Rating (ER).

- ***The General Rating*** is similar to the General Service Rating (GSR) of the 1952 structure. It reflects qualification in all aspects of an occupational field and assures the development of broadly-qualified senior petty officers.
- ***The Service Rating*** is similar to the "old" Emergency Service Rating (ESR) and Selective Emergency Service Rating (SESR). It is a segment of a general rating which reflects qualification in limited areas of an occupational field, and provides for specialization wherever it is needed. It may be used at as many pay grades as the needs of the service dictate.
- ***The Emergency Rating*** is similar to the Exclusive Emergency Service Rating (EESR) of the 1952 structure. It reflects qualification in a civilian skill not identified in peacetime, but required in wartime.

The following chart, based on the latest available information, shows how the conversion job stands at about the halfway mark. So far, 45 ratings have been converted to the new structure and 19 of them have not yet been reclassified. In the chart, italicized letters under "Type of Rating" indicate that conversion has already taken place or been approved. The asterisks (*) denote rating fields for which conversion plans are either under study or in various stages of processing.

RATING GROUP AND TITLE	TYPE OF RATING	AUTHORIZED PAY GRADES
GROUP I — DECK		
Boatswain's Mate (BM)	*GR*	E-4 to E-9
Quartermaster (QM)	*GR*	E-4 to E-9
Signalman (SM)	*GR*	E-4 to E-9
*Radarman (RD)	GSR	E-4 to E-9
Sonarman (SO)	*GR*	E-6 to E-9
SOA (Airborne)	*SR*	E-4 and E-5
SOG (Surface)	SR	E-4 and E-5
SOS (Submarine)	*SR*	E-4 and E-5
SOO (Oceanographer)	*SR*	E-4
Harbor Defenseman (ESH)	*ER*	E-4 to E-9
Stevedore (ESB)	*ER*	E-4 to E-9
GROUP II — ORDNANCE		
Torpedoman's Mate (TM)	GR	E-4 to E-9
*Gunner's Mate (GM)	GSR	E-4 to E-9
GMM (Mounts)	ESR	E-4 to E-9
GMT (Turrets)	ESR	E-6 to E-9
GMA (Armorer)	ESR	E-4 to E-9
Nuclear Weapons Man (NW)	*GR*	E-4 to E-9
*Fire Control Technician (FT)	GSR	E-4 to E-9
FTG (Missile Guidance Systems)	ESR	E-4 to E-9
" " " "	SESR	E-4
FTM (Manually Controlled Directors)	ESR	E-4 to E-9
" " " "	SESR	E-4
FTU (Underwater)	ESR	E-4 to E-9
" "	SESR	E-4
FTA (Automatic Directors)	ESR	E-4 to E-9
" " "	SESR	E-4
FTE (Electromechanical)	ESR	E-4 to E-9
" "	SESR	E-4
FTL (Integrated Systems)	ESR	E-4 to E-9
" " "	SESR	E-4
Guided Missileman (GS)	*GR*	E-4 to E-9
Mineman (MN)	GR	E-4 to E-9
GROUP III — ELECTRONICS		
*Electronics Technician (ET)	GSR	E-4 to E-9
ETN (Communications)	ESR	E-4 to E-9
" "	SESR	E-4
ETR (Radar)	ESR	E-4 to E-9
" "	SESR	E-4
ETS (Sonar)	ESR	E-4 to E-9
" "	SESR	E-4
GROUP IV — PRECISION EQUIPMENT		
Instrumentman (IM)	*GR*	E-4 to E-9
Opticalman (OM)	*GR*	E-4 to E-9
GROUP V — ADMINISTRATIVE & CLERICAL		
*Radioman (RM)	GSR	E-4 to E-9
Communications Technician (CT)	*GR*	E-4 to E-9
*Yeoman (YN)	GSR	E-4 to E-9
YNT (Typist)	ESR	E-4 to E-9
YNS (Stenographer)	ESR	E-4 to E-9
YNM (Mailman)	ESR	E-4 to E-9
*Personnel Man (PN)	GSR	E-4 to E-9
PNI (Classification Interviewer)	ESR	E-4 to E-9
PNT (Training Assistant)	ESR	E-4 to E-9
PNA (Personnel Records Clerk)	ESR	E-4 to E-9
Machine Accountant (MA)	*GR*	E-4 to E-9
Storekeeper (SK)	*GR*	E-4 to E-9
Disbursing Clerk (DK)	GR	E-4 to E-9
Commissaryman (CS)	*GR*	E-4 to E-9
Ship's Serviceman (SH)	*GR*	E-4 to E-9
Journalist (JO)	*GR*	E-4 to E-9
Physical Training Instructor (ESE)	EESR	E-4 to E-9
Instructor (Miscellaneous) (ESI)	EESR	E-4 to E-9
Firefighter (ESF)	*ER*	E-4 to E-9
Transportation Man (ESR)	EESR	E-4 to E-9
Chaplain's Assistant (ESC)	EESR	E-4 to E-9
Welfare and Recreation Leader (ESW)	EESR	E-4 to E-9
Booker (Motion Picture Service) (ESU)	EESR	E-4 to E-9
Telecommunications Censorship Technician (ESK)	EESR	E-4 to E-9
GROUP VI — MISCELLANEOUS		
Lithographer (LI)	*GR*	E-4 to E-9
Illustrator Draftsman (DM)	*GR*	E-4 to E-9
Musician (MU)	GR	E-4 to E-9
Photogrammetry Assistant (ESP)	EESR	E-4 to E-9

RATING GROUP AND TITLE	TYPE OF RATING	AUTHORIZED PAY GRADES
GROUP VII — ENGINEERING & HULL		
Machinist's Mate (MM)	GR	E-4 to E-9
Engineman (EN)	GR	E-4 to E-9
Machinery Repairman (MR)	GR	E-4 to E-9
Boilerman (BT)	GR	E-4 to E-9
Boilermaker (BR)	GR	E-6 to E-9
Electrician's Mate (EM)	GR	E-4 to E-9
IC Electrician (IC)	GR	E-4 to E-9
Shipfitter (SF)	GR	E-6 to E-9
SFM (Metalsmith)	SR	E-4 and E-5
SFP (Pipefitter)	SR	E-4 and E-5
Damage Controlman (DC)	GR	E-4 to E-9
Patternmaker (PM)	GR	E-4 to E-9
Molder (ML)	GR	E-4 to E-9
Underwater Mechanic (ESM)	EESR	E-4 to E-9
GROUP VIII — CONSTRUCTION		
Engineering Aide (EA)	GR	E-6 to E-9
EAS (Surveyor)	SR	E-4 and E-5
EAD (Draftsman)	SR	E-4 and E-5
Construction Electrician (CE)	GR	E-6 to E-9
CEW (Wiring)	SR	E-4 and E-5
CEP (Power)	SR	E-4 and E-5
CES (Shop)	SR	E-4 and E-5
CET (Telephone)	SR	E-4 and E-5
Equipment Operator (EO)	GR	E-6 to E-9
EOH (Hauling)	SR	E-4 and E-5
EON (Construction)	SR	E-4 and E-5
Construction Mechanic (CM)	GR	E-6 to E-9
CMA (Automotive)	SR	E-4 and E-5
CMH (Heavy)	SR	E-4 and E-5
Builder (BU)	GR	E-6 to E-9
BUL (Light)	SR	E-4 and E-5
BUH (Heavy)	SR	E-4 and E-5
BUR (Concrete)	SR	E-4 and E-5
Steelworker (SW)	GR	E-6 to E-9
SWF (Fabricator)	SR	E-4 and E-5
SWE (Erector)	SR	E-4 and E-5
Utilities Man (UT)	GR	E-6 to E-9
UTA (Air Conditioning)	SR	E-4 and E-5
UTB (Boilerman)	SR	E-4 and E-5
UTP (Plumber)	SR	E-4 and E-5
UTW (Water & Sanitation)	SR	E-4 and E-5
GROUP IX — AVIATION		
Note: A number of change recommendations for the Group IX ratings were in advanced stages of processing at the time this issue went to press. As soon as possible after the results are known, ALL HANDS will pass the information along.		
*Aviation Machinist's Mate (AD)	GSR	E-4 to E-9
ADP (Propeller Mechanic)	ESR	E-4 to E-9
ADJ (Turbojet Engine Mechanic)	ESR	E-4 to E-9
" " " "	SESR	E-4
ADR (Reciprocating Engine Mechanic)	ESR	E-4 to E-9
" " " "	SESR	E-4
*Aviation Electronics Technician (AT)	GSR	E-4 to E-9
ATR (Radar)	ESR	E-4 to E-9
" "	SESR	E-4
ATS (ASW)	ESR	E-4 to E-9
" "	SESR	E-4
ATN (Communications & Navigation Equipment)	ESR	E-4 to E-9
"	SESR	E-4
Aviation Ordnanceman (AO)	GR	E-4 to E-9
*Aviation Guided Missileman (GF)	GSR	E-4 to E-9
*Aviation Fire Control Technician (AQ)	GSR	E-4 to E-9
AQB (Bomb Director)	ESR	E-4 to E-9
" " "	SESR	E-4
AQF (Aircraft Armament Control Systems)	ESR	E-4 to E-9
"	SESR	E-4
*Air Controlman (AC)	GSR	E-4 to E-9
ACT (Tower)	ESR	E-4 to E-9
" "	SESR	E-4 and E-5
ACR (Radar)	ESR	E-4 to E-9
" "	SESR	E-4 and E-5
ACW (Airborne CIC Operator)	ESR	E-4 to E-9
" " " "	SESR	E-4 and E-5
*Aviation Boatswain's Mate (AB)	GSR	E-4 to E-9
ABU (Utility)	ESR	E-4 to E-9
" "	SESR	E-4
ABG (Gasoline Handler)	ESR	E-4 to E-9
" " "	SESR	E-4
ABA (Airship Rigger)	ESR	E-4 to E-9
*Aviation Electrician's Mate (AE)	GSR	E-4 to E-9
AEM (Electrician)	ESR	E-4 to E-9
" "	SESR	E-4
AEI (Instrument Repairman)	ESR	E-4 to E-9
" " "	SESR	E-4
*Aviation Structural Mechanic (AM)	GR	E-6 to E-9
AMS (Structural Mechanic)	SR	E-4 and E-5
AMH (Hydraulic Mechanic)	SR	E-4 and E-5
AME (Safety Equipment)	SR	E-4 and E-5
Parachute Rigger (PR)	GR	E-4 to E-9
Aerographer's Mate (AG)	GR	E-4 to E-9
*Tradevman (TD)	GSR	E-4 to E-9
TDR (Repairman)	ESR	E-4 to E-9
" "	SESR	E-4
TDI (Instructor)	ESR	E-4 to E-9
" "	SESR	E-4
Aviation Storekeeper (AK)	GR	E-4 to E-9
*Photographer's Mate (PH)	GSR	E-4 to E-9
PHG (Cameraman)	ESR	E-4 to E-9
" "	SESR	E-4
PHA (Aerial Camerman)	ESR	E-4 to E-9
" " "	SESR	E-4
PHR (Camera Repairman)	ESR	E-4 to E-9
PHL (Laboratory Technician)	ESR	E-4 to E-9
PHM (Microfilm)	ESR	E-4 to E-9
Photographic Intelligenceman (PT)	GR	E-4 to E-9
*Aviation Pilot (ESV)	EESR	E-4 to E-9
*Aircraft Carburetor Mechanic (ESA)	EESR	E-4 to E-9
GROUP X — MEDICAL		
Hospital Corpsman (HM)	GR	E-4 to E-9
GROUP XI — DENTAL		
Dental Technician (DT)	GR	E-4 to E-9
GROUP XII — STEWARD		
Steward (SD)	GR	E-4 to E-9

GENERAL APPRENTICESHIPS AND THEIR ABBREVIATIONS

PAY GRADE	SEAMAN	FIREMAN	CONSTRUCTION MAN	AIRMAN	HOSPITALMAN	DENTALMAN	STEWARDSMAN
E-1 (Recruit)	SR	FR	CR	AR	HR	DR	TR
E-2 (Apprentice)	SA	FA	CP	AA	HA	DA	TA
E-3 (Seaman, Fireman, etc.)	SN	FN	CN	AN	HN	DN	TN
Rating Groups to which these may advance	I-VI	VII	VIII	IX	X	XI	XII

This Is What You Can Expect If You Get Orders To Guam

IF YOU'VE RECEIVED orders to Guam, or receive them in the near future, you'll soon be discovering that it's not the sleepy tropical island you may have expected. Instead, it's a strategic military base with an ever-growing and progressive civilian community.

This article is designed to give you some facts about Guam, and what to expect during your tour of duty there.

Climate and Geography—Guam is the largest and most populous of the chain of 17 islands known as the Marianas. The island lies about 5000 miles southwest of San Francisco, 1500 miles east of Manila and 1350 miles south of Tokyo. Covering approximately 220 square miles, Guam is about 32 miles long and varies in width from four-and-a-half to eight miles. There are about 70,000 people on the island.

The southern end of the island consists of rolling hills and small mountains with a few small streams. The northern half is a flat coral plateau.

Guam is a principal stop for transocean aircraft between the West Coast of the United States and the Philippines. It is served regularly by MATS and commercial airlines.

Local time is 18 hours ahead of Pacific Standard Time. For example, at 9 o'clock Wednesday morning on Guam, it is 3 o'clock Tuesday afternoon in San Francisco.

On Guam you will be living in a tropical climate, warm and humid the whole year. During the dry season the trade winds keep the island relatively cool.

The average rainfall is 90 inches a year. During the rainy season—July through December—there are showers lasting from five minutes to five hours, several times a day. It rains during the dry season too, but much less frequently.

Guam is in the ocean area where typhoons form. However, they rarely have time to develop into more than tropical disturbances with heavier-than-normal winds and rains before moving out of the area.

All hands are warned well in advance of the approach of storms and have ample time to take shelter, if necessary. For most people, the occasional storms cause more inconvenience than damage. Only two major typhoons have struck the island in the last 10 years, one in 1949 and one in 1957.

The hot, bright tropical sun can be a real danger to the inexperienced. Unless you limit your exposure to the sun to very short periods at first (10 minutes or less), you will suffer a painful and sometimes disabling sunburn. The sun's glare and the reflection from white coral and concrete will produce eyestrain and headaches, unless you wear dark glasses.

English is the official language of Guam. It is spoken throughout the island and is a required subject in the public school. Guam's oldtimers still speak Chamorran and many Guamanian children do not learn English until they enter school.

The only animals native to Guam are birds, bats, shrews and small harmless lizards. There are still a few carabaos on the island, originally imported from the Philippines. Some cattle and a few small horses have also been imported.

There are no poisonous reptiles on Guam. Toads, snails and small lizards are numerous, but not too troublesome. Mosquitoes are still plentiful and annoying. However, there is no record of any cases of malaria on Guam.

Entry Authorization—Your dependents must have authority to enter Guam before they can make the trip. This authority is granted by Commander Naval Forces Marianas on request as follows:

Dependents of officers of the rank of Commander or Lieutenant Colonel and above are at present eligible for entry authorization and concurrent travel on the basis of availability of government quarters.

No others are eligible for concurrent travel at present. There is a waiting time of up to seven months for Navy housing.

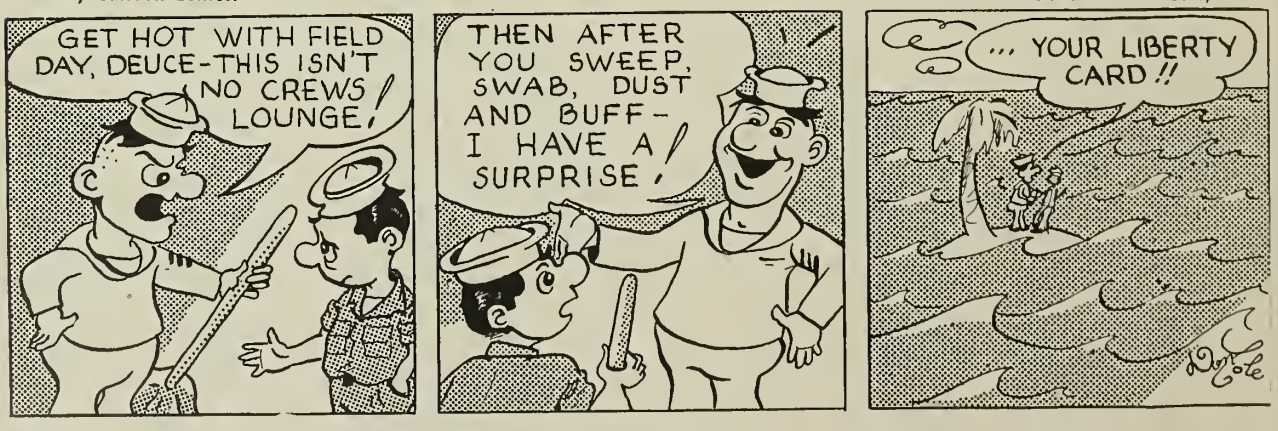
No entry authorization will be granted on the basis of private rental housing obtained by an agent before your arrival.

All requests for concurrent travel must include the age and sex of children, the new duty station and the estimated date of arrival at the port of embarkation. *Only those eligible* should send requests, and these should be sent officially by your present commanding officer.

After you arrive, authorization for the entry of your dependents will be given about six weeks before quarters are expected to be available, so that your family can arrive at about the same time the quarters are ready.

Immunization — You should start your immunization series as soon as

All Navy Cartoon Contest — **Donald David Cole, PHG3**



you receive your travel orders, as your sailing will be delayed if the series of immunizations are not completed by sailing date.

The nearest naval hospital or dispensary or other military installation will normally administer the necessary immunizations. If you choose a civilian doctor, the charge must be incurred at your own expense and will not be reimbursable. Keep your immunization record in your personal possession as you will be required to show it when you report to the Twelfth Naval District Transportation Office.

Household Effects—A suggestion to housewives: Bring only those articles that may simplify your household duties. Domestic help is scarce and when available is usually on a part-time arrangement. Toasters, television sets, mixers, coffee makers, clocks, steam irons, floor polishers, vacuum cleaners, radios and fans are desirable. If you have electric sheets or blankets, they can be used a few hours daily during the rainy season to keep the beds dry. Bring only 120 or 220 volt electrical appliances. There is no gas on the island.

A washing machine is a must, and during the rainy season a dryer is desirable. If you do not own a washer or dryer they can be bought at the main Navy Exchange on Guam. Ironing boards are not readily available and it is best to bring one with you.

You must furnish your own china, linen, silver, glassware and cooking equipment. Beds are furnished, but you must provide your own pillows and bedding. Foam rubber or dacron pillows are best for Guam's climate.

Small hand tools are not readily available, so any that you have will come in very handy.

Quarters are adequately furnished with rattan-style furniture. If you would like certain special pieces with you, here are some further hints. Lamps are furnished, but not always in sufficient quantity. Nested tables are a convenience and card tables are desirable. Favorite vases may be brought, as there are quantities of flowers available. Bedspreads are fairly difficult to buy, and there are times when it is comfortable to use one as a coverlet at night.

Clothing—Cotton clothing is most desirable; silks are comfortable in the evening; nylon is too warm for most; glazed cottons are nice; denims hold up very well—bring anything cool and washable. Sun-top dresses are very popular and comfortable.

It's suggested that women who sew bring their sewing machine, a supply of colored thread and zippers.

Shipment of Personal Effects—Your Supply Officer and the Household Effects Section of the Naval Supply Depot of the District in which you are residing will assist you in your planning. You will be able to take personal luggage with you. Hold baggage normally accompanies you if you travel by ship. Your household effects and automobile generally arrive 6 to 8 weeks after your arrival.

Personal Luggage—Your personal luggage will necessarily include sufficient warm clothing for your few days' stay in San Francisco and for wear aboard ship the first few days. The remainder of your trip you will be comfortable in light, washable casual attire. There are limited laundry and ironing facilities on all MSTS ships. If your hold baggage is not accompanying you, you should include sufficient clothing to carry you through your first few days on Guam. In addition to your clothing and personal items, you should include a travel iron and a lightweight raincoat.

Hold Baggage—If you travel by ship, your hold baggage will accompany you and may be claimed immediately upon your arrival at Guam. If you travel by air, your baggage may be shipped on the first available commercial or government ship departing the east or west coast, but the weight will be charged against weight allowance for household goods. Your hold baggage should include items which you feel you must have to operate your home on Guam for the first month or two.

Shipment of HHE—You must plan for two shipments—the things you will want with you on Guam and the remainder which you will want to place in storage. Again, your Supply Officer will assist you in your planning. A completed application for Transportation of Household Goods (Form 116) together with certified copies of your orders will be required for each type of shipment. Certified copies of authority for entry of dependents are required for shipment of household effects to Guam.

Automobile—Public transportation is practically nonexistent. Your automobile will be indispensable.

Officers, and enlisted personnel in grade E-4 with more than four years' service, and above, can ship cars on permanent change of station orders at government expense. Other enlisted personnel may also ship cars by getting specific approval in writing from the Chief, Bureau of Supplies and Accounts.

You must have this approval before delivering your car to the Naval Supply Center, Oakland.

As soon as you get your orders, send a completed DD Form 828 (Motor Vehicle Shipment Application) direct to Naval Supply Center, Oakland; Naval Supply Depot, Seattle; Naval Shipyard, Long Beach; Naval Supply Depot, Bayonne; or Naval Supply Center, Norfolk, whichever port is more convenient for delivery of your car.

NOW HERE'S THIS

From Sea to Cecil

"Welcome to Cecil, Cecil," Cecil said to Cecil at Cecil when Cecil—Cecil's relief—reported aboard.

That's the way things went at NAS Cecil Field, Fla., when Cecil C. Britt, BMC, replaced Cecil M. Green, QMC, as Cecil Field's Master-at-Arms.

Green, who was MAA for 20 months before Britt's arrival, moved on to USS *Compass Island* (AG 153). Britt was skipper of a water barge at Guantanamo Bay, Cuba, before he was ordered to Cecil Field.

Both Cecils have seen scads of sea duty. But, when Cecil turned over his shield to Cecil, no one thought to ask if either of Cecil's Cecils had ever been to Sicily.

The climate is hard on cars. Don't buy a new car just to ship to Guam, but don't bring a junker that needs a lot of work. Have your car in excellent mechanical condition. Undercoating is a must. A good paint job will keep your car serviceable longer.

Repairs on Guam are not up to Stateside standards, but are satisfactory. In some cases, there are delays while parts are being shipped.

Travel—Whether you travel by MATS or MSTS, you can normally expect to spend a couple of days in San Francisco while being processed by the District Passenger Officer. Government transient quarters are not available. While being processed, you will obtain your medical clearance. During this period you will deliver your hold baggage to Fort Mason for shipment.

If you travel by air, you will depart from Travis Air Force Base. Transient accommodations are available at Hickam Air Base in the event your aircraft stops overnight in Hawaii. Usually, the air crossing takes two days, including an overnight stop at Hickam and a short fuel stop at Wake Island. You will find it to be a fast and comfortable trip. If dependents are traveling alone, other passengers and the crew will assist with the children. Your luggage is limited to 65 pounds per person and will not be available to you until your arrival at the MATS Terminal, Guam.

If you travel by ship, the Pacific crossing will take two weeks. The District Passenger Officer will provide you detailed instructions for travel via MSTS. Each member of the family is authorized two pieces of standard luggage (suitcases) to be stowed in your cabin. The first few days out you will feel comfortable in the heavier clothing you brought for your stay in San Francisco. Lighter casual dress will be appropriate the remainder of your voyage.

Enlisted personnel must be in uniform. Officer personnel must be in uniform during the evening meal. All military personnel must be in uniform when embarking and debarking. Facilities for your health and comfort, including medical care, recreation and a laundry are available. Essential needs are sold in the ship's store.

ANSWERS TO QUIZ AWAY

1. (b) Answered by centerspread on page 32 of the July 1959 issue.
2. (d) Answered on page 40, col. 2, para. 4, of the August 1959 issue.
3. (a) Answered on page 31, col. 2, para. 2, of the August 1959 issue.
4. (b) Answered by centerspread on page 33 of the August 1959 issue.
5. (c) Answered by box on page 52 of the June 1959 issue.

Quiz Aweigh is on page 45.

Uniforms—You are required to have all prescribed articles of uniform. Officers and enlisted personnel may wear civilian clothing in accordance with the general provisions of section 4, *Uniform Regulations*. Uniform of the day is as follows:

- *Male officers and Chief Petty Officers.* Tropical Khaki, or Tropical Khaki Long; helmet optional.

Tropieal White, or Tropical White Long; helmet optional. (For Medical and Dental Corps Officers only.)

- *Women Officers.* Indoor Duty White (Nurses only.)

Working Gray.

- *Enlisted Men, other than Chief Petty Officers.* Undress White B.

Uniform for Liberty for male officers and CPOs is same as above. Women officers wear Working Gray. Enlisted men below CPO grade wear Undress White, A, with neckerchief, on liberty.

Military Facilities—You will find standard shopping conveniences comparable to those of a small community. The Navy Exchange, in addition to functioning as a retail department store, includes beauty, tailor and barber shops. The Commissary Store is complete with fresh frozen foods and vegetables. Navy Exchanges annexes with limited facilities are operated at Nimitz Hill, Naval Air Station, Naval Magazine and the Naval Communication Station. The Air Force offers comparable activities at Andersen Air Force Base.

Medical Care—The Naval Hospital, Guam, ranks among the finest. It is large, completely equipped and staffed by competent medical personnel. Dependents' care includes pediatrics. Dental care to dependents is available, though limited to emergencies and necessary treatment. Dependent's medical records should be brought. In addition to the Naval Hospital, dispensaries are maintained at the Naval Station, Naval Air Station and the Naval Communication Station.

Housing—If you have been authorized concurrent travel, you may expect to move directly into permanent-type quarters or into interim quarters. If concurrent travel is not approved, there will be a waiting time of about three to four months for officers' quarters and from seven to nine months for enlisted quarters.

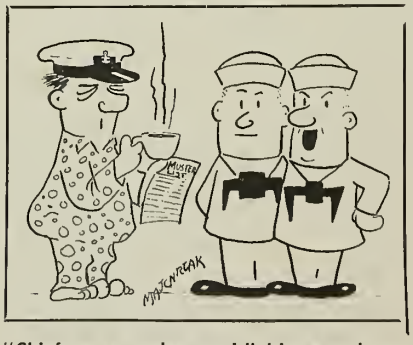
The majority of quarters are of concrete and are constructed for comfortable living in the tropics. Interim quarters are principally quonset types.

Although there are private rentals available on Guam, there are very few that are acceptable, and for these the rent is excessive. To prevent hardships and disappointments, if you wish entry authorization for your dependents on the basis of a private rental, you must come to Guam first and obtain the rental personally. No entry authorization will be granted on the basis of rentals obtained in advance through an agent. In this case, the house will be inspected for suitability, adequacy of utilities and furnishings and sanitary condition by Commander Naval Forces Marianas' Housing Inspector. If a house does not measure up to all standards, it will not be accepted.

If you arrive with your dependents, the command to which you are reporting will have your quarters ready for you, equipped with essentials to supplement your hold baggage and to tide you over until your household effects shipment arrives.

If you must wait for housing, the

David J. Majchrzak, DN, USN



"Chief never wakes up 'til his second cup of coffee."

housing officer of your new duty station will process your housing application. Your eligibility for quarters commences when you arrive on Guam. When quarters are available the entry of your dependents will be authorized, and Commander Naval Forces Marianas will notify the Twelfth Naval District Passenger Transportation Officer in San Francisco, who will further notify your dependents of the authorization, assign space on a transport or plane and advise them of the proper steps to be taken regarding inoculations, baggage limitations, etc.

In accordance with existing local housing regulations on Guam, only the following personnel are eligible for Navy Public Quarters:

Officers—All ranks.

Enlisted—Pay grades E-7 through E-5—and E-4 with seven or more years' service for pay purposes. EMs must be assigned for a normal two-year tour.

Recreation—Guam provides almost every sport except the winter variety.

The Armed Forces Golf Course is a well tended modern course of 18 holes. It is operated as a recreation facility for all military and Civil Service personnel and their dependents. There is also a nine-hole pitch-and-putt course and driving range.

Several beaches are suitable for swimming, picnics and other beach activities. Shell-collecting, spear-fishing and skin-diving are popular.

Additional sports activities include tennis, bowling, archery, fishing, hiking, handball and badminton. Baseball, softball, basketball and even football, are all very popular.

Other recreational activities such as hobby shops, libraries, bridge clubs and "Little Theater" groups—and almost unlimited opportunities for the camera fan—provide other wholesome outlets for individuals who do not care for strenuous sports.

Movies (outdoor) are nightly features. Most armed forces installations on Guam have well stocked libraries and reading rooms that are available to both dependents and armed forces personnel.

Civic activities and social organizations for adults and young people include the Elks, Masons, Shriners, Boy Scouts, Girl Scouts, Lions Clubs, VFW, American Legion, the Gasbags (Guamanian charitable organization), Guam Fine Arts Society and many others. Civic pride and activity run high on Guam.

Officers' and CPO's Mess (Open), enlisted men's clubs and a few island "nite spots" offer good food and entertainment.

Of particular interest to newcomers are visits to the local villages and the study of local customs both old and new. There are several places of historical interest including the monument to Ferdinand Magellan, ruins of the Spanish Governor's Palace, remains of two early Spanish forts, the Guam Museum, Japanese caves (from the occupation) and several "latte" sites. (These are ancient stone pillars believed to be ruins of Chamorro buildings erected hundreds, possibly thousands of years ago.)

Big Killing

During 1958, 565 Navymen and Marines died as a result of motor vehicle accidents.

Fewer Navy and Marine personnel were involved in accidents than during any of the five preceding years. However, the number of deaths occurring as a result of motor vehicle accidents was almost the same as the preceding year's total of 568.

Even with the lower accident rate, there were 6543 injuries recorded last year among Navy and Marine Corps personnel.

Here are the grim statistics for 1958:

- 6543 Navy and Marine Corps personnel injured in motor vehicle accidents.
- 565 of your shipmates died as a result of these accidents.
- 273,279 sick days were accumulated as a result of automobile accidents.
- 749 of the injured were on the sick list every day of the year.
- About 90 per cent of all personnel involved in accidents were on leave or liberty at the time of their accident.
- 75 per cent of all accidents involved passenger cars.
- It cost the government an estimated 20 million dollars as a result of these automobile accidents.
- Enlisted men were involved in three times as many accidents as officers.

Schools—Education is compulsory for all youngsters between the ages of six and 16. Elementary school facilities and curricula are fair in comparison with the average Stateside school system. Junior high and high school facilities and curricula are somewhat below Stateside standards, but are rated as adequate. There are both public and parochial schools covering all grades from the first through high school. Certification from the last school attended, or birth certificates for those entering the first grade, are necessary for admittance to local schools. Bus transportation is provided for grammar and high school students on a near door-to-door basis. Kindergartens are operated for pre-school children.

The Guam Territorial College provides dependents and military personnel with an opportunity to obtain college credits in liberal arts, music and agricultural curricula. These credits are acceptable in Stateside colleges and universities.

There are well-planned and adequate Information and Education programs including USAFI courses being conducted by all the larger armed forces installations. All members of the armed services are encouraged to use this opportunity.

Churches—Guam is predominantly Roman Catholic, insofar as the Guamanian population is concerned. Some Protestant churches have been established, with General Baptist and Seventh Day Adventist constituting the larger groups. Latter Day Saints and Christian Scientists are also well represented.

Naval and Air Force chapels provide Protestant, Roman Catholic and Jewish religious services for all military personnel and their dependents on Guam. Sunday schools, Bible classes and other religious activities are conducted regularly.

Leave Program—Personnel are encouraged to take annual leave while on Guam. Space-available MSTS travel to the Philippines and space-available MATS travel to Japan or the Philippines are part of the isolated area leave program authorized by the Chief of Naval Operations. You may arrange commercial transportation at your own expense for travel to other countries of the Far East where travel is authorized.

DIRECTIVES IN BRIEF

This listing is intended to serve only for general information and as an index of current BuPers Instructions, BuPers Notices, SecNav Instructions and SecNav Notices that apply to most ships and stations. Many instructions and notices are not of general interest and hence will not be carried in this section. Since BuPers Notices are arranged according to their group number and have no consecutive number within the group, their date of issue is included also for identification purposes.

BuPers Instructions

No. 1120.15D — Described the eligibility requirements and processing procedures whereby qualified men and women on active duty may seek permanent or temporary appointment to commissioned status in the various sections of the Medical Service Corps.

No. 1120.20B — Invited applications for flight training as Naval Aviation Cadets from active duty enlisted personnel.

No. 1301.6B — Standardized the method of procuring, accounting and administering naval officers performing duty with the Army or Air Force.

No. 1760.17—Published information on the revised policy concerning "conditional" or "unconditional" discharges for Korean conflict veterans, under which they may begin education and training under the Veterans' Readjustment Assistance Act of 1952.

No. 1760.3B, Change No. 4—Revised information concerning certain states now paying Korean bonuses for the first time, and amended the previously published provisions concerning certain other states.

SecNav Instructions

No. 1741.4A—Established regulations and procedures for the implementation of the provisions of the Housing Act of 1954, designed to provide mortgage insurance for members of the armed forces.

No. 1700.6—Authorized and encouraged participation of Navy and Marine Corps personnel in competitive and exhibition parachute jumping.

SecNav Notices

No. 1421 (31 August) — Announces approval by the President of a report by a selection board which recommended USN and USNR line officers for temporary promotion to grade of captain.

No. 1421 (8 September)— Announces approval by the President of a report by a selection board which recommended Marine Corps officers for temporary promotion to major.

BuPers Notices

No. 1306 (2 September)—Promulgates the sea-tour commencement cutoff dates to establish the eligibility of enlisted personnel for Scavey Segment One, effective 1 Feb 1960.

No. 1111 (17 September)—Announces the dates (23, 24 Feb 1960) on which the annual examination for appointment to cadetship in the U. S. Coast Guard will be conducted.

No. 1540 (17 September)—Announces change No. 1 to BuPers Notice 1540 of 9 Jun 1959, which was concerned with nuclear weapons training courses conducted by Field Command, Defense Atomic Support Agency.

No. 1300 (18 September)—Solicits volunteers to participate in the Navy's support of the U. S. Antarctic Research Program, 1960-61.

Navymen Are Cards — And They Have Them Too

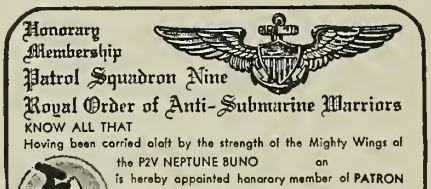
The Navy seems to be just full of cards—for everything from Shellbacks to Tailhookers.

In the latest batch to come to our attention there are cards for:

The Order of the Great Lakers and Lockmasters — Navymen who were on board ships which cruised all five of the Great Lakes during Operation Inland Seas.

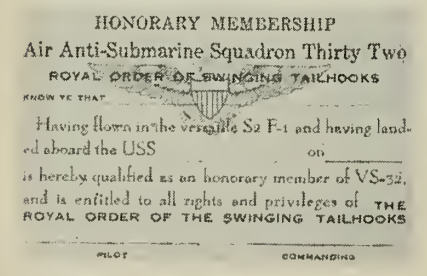
The Royal Order of Ocean-Going Tugs — Honorary members of the ship's company of USS *Tatnuck* (ATA 195).

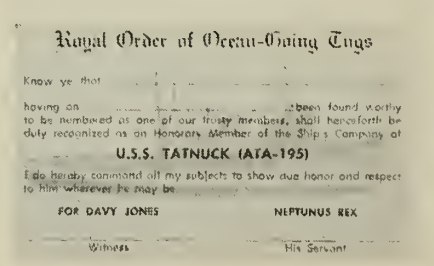
The Royal Order of Swinging Tailhooks — Honorary members of Air Antisubmarine Squadron 32.



And the Royal Order of Antisubmarine Warriors — Honorary members of Patrol Squadron Nine.

Here's what these four look like:





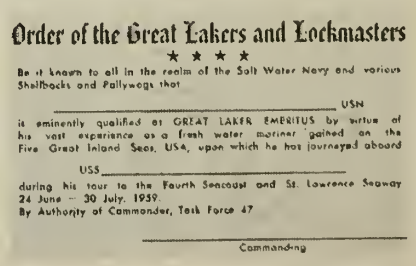
Deadline for Naval Institute Contest is 1 December

If you are planning to enter the 1960 U. S. Naval Institute's General Prize Essay Contest you had better get hot, as it closes 1 Dec 1959. This contest is open to all Navy and Marine Corps personnel. There is no special category for enlisted personnel this year as there has been in the past.

First prize for an essay on any naval subject is $1500 plus a gold medal and life membership in the Naval Institute. Runners-up may receive honorable mention or a special award. In addition, essays may be accepted for publication in the *U. S. Naval Institute Proceedings* at regular article rates.

Essays should not exceed 5000 words and must be typewritten, double-spaced on paper about 8½ by 11 inches and submitted in duplicate.

The author's name is not to appear on the essay itself, but instead, a motto on the title page in addition to the title. The motto should also



appear on the outside of a sealed envelope which contains the author's identification and address.

The essay and identifying envelope must be mailed in a large sealed envelope marked "General Prize Essay Contest" and addressed to the Secretary-Treasurer, U. S. Naval Institute, Annapolis, Md., in time to meet the 1 Dec 1959 deadline.

According to the contest rules, the essays should, in general be interpretive or pertain to an analysis and not merely an exposition or personal narrative.

Reemployment Rights of Men Leaving Jobs to Enter Navy

If you left a job to come into the Navy and are now returning to civilian life after not more than four years' service, you have a job waiting for you with your old company. This is assured you by Section Nine of the Universal Military Training and Service Act.

You are not just entitled to any job, but to a job that you would have had if you had not gone into the Navy. It doesn't matter whether you enlisted in the Navy, were drafted, were an enlisted man or an officer—the job is still yours.

The "job you would have had" is sometimes hard to determine. You must prove that you would have had the job because of seniority or by some other reason.

David J. Majchrzak, DN, USN

"We will never do that for a headache again will you?"

Usually, your former employer is familiar with this Act and will give you a job without hesitation. But there may be employers who are not familiar with the provisions of the Act. That's where the Bureau of Veteran's Reemployment Rights, U.S. Department of Labor, may be of help. If you present your case to them, they will contact your employer and explain your rights and his obligations under the law.

BuPers Inst. 1760.16 directs commanding officers to advise men and women about to be separated of their rights in this matter.

Pamphlets such as "Federal Benefits" and "Facts You Should Know Upon Relief From Active Duty or Discharge" will be helpful.

Scholarships for Navy Juniors Between Ages Six and Ten

The sons of deceased Navy or Marine Corps men, who are between the ages of six and 10, are eligible to compete for a free education at Girard College in Philadelphia.

It is a privately endowed, free boarding school for youths whose fathers are deceased. Boys must be in good physical health, come from a family in need of financial help and show promise of good scholastic performance. They are prepared for college or for a career in business or industry.

No charge is made for any phase of the Girard program. Every boy who qualifies for admission receives a full scholarship which covers all expenses at the school for tuition, room, board, books, clothing, medical and dental care. The only costs borne by the family are spending allowances, and holiday and vacation expenses.

A mother's remarriage, either before the boy's admission or later, does not affect the boy's eligibility to enter or continue his studies.

There are two main school divisions. The Lower School for grades one through six, and the Upper School that includes the grades eight through 12.

More complete information can be obtained from The Director of Admissions and Student Relations, Girard College, Philadelphia 21, Pa.

Long Arm of Coincidence (and Kittiwake) Rescues Man at Sea

Italian merchant seaman Garguilo Francesco owes his life to a series of coincidences out on the high seas, all of which were brought together by the action of a Navy ship and the sharp eyes of a U. S. Navyman.

Francesco was saved from drowning in the Atlantic some 40 miles off the Virginia Capes by the submarine rescue vessel USS *Kittiwake* (ASR 13.)

The rescue of the apparently doomed Italian seaman has been called a one-in-a-million shot.

In the first place, he was able to keep himself afloat without a lifejacket for more than two hours after accidentally falling from a Liberian merchant ship.

Essential ingredient for the rescue, however, was the presence of *Kittiwake* in the area—and it was here that the long arm of coincidence lent a hand.

At approximately the same moment that Francesco fell unnoticed from his ship, a diver conducting deep-sea diver training operations off *Kittiwake* many miles away, fell ill from oxygen and carbon dioxide poisoning.

He was immediately placed in the ship's decompression chamber, and *Kittiwake* raced toward Norfolk and more extensive medical treatment for the stricken man. But for that unscheduled emergency run, *Kittiwake* would not have passed within miles of Francesco.

Incident number two occurred when Paul Gettle, SN, USN, spied the struggling swimmer from *Kittiwake's* deck. In a vast expanse of ocean, a lone swimmer is practically invisible.

The Italian mariner, who termed himself "only a fair swimmer," summed up his long ordeal: "All I could see was death."

Gettle said later: "I thought at first it was a school of fish. I couldn't believe a man would be swimming that far from shore." He looked again, and the rescue operation got underway.

DEEP MYSTERY — Below the Fleet's ships is an unknown world that Navy scientists are continually exploring.

SURVEYING SHIP

Earlier this year (in the March "Underseas Navy" issue), we attempted to describe, so far as space and our state of knowledge would permit, what the ocean was like beneath the surface. We mentioned that, included among the ships and institutions engaged in fishing for more information were the Hydrographic Office with YF 854, *since named* USS Littlehales *(AGSC 15), and two 2700-ton former seaplane tenders* San Pablo *and* Rehoboth. *It has since occurred to us that you might be interested to hear more about how they went about their jobs, from experts right on the scene. Permit us to introduce you to* USS Rehoboth *(AGS 50):*

REHOBOTH was originally commissioned as a seaplane tender in February 1944 and served in the Pacific area. Decommissioned in 1947, she was recommissioned as an AGS (Auxiliary General Survey) late in 1948. Her primary mission was and is, to survey the oceans as directed by the Hydrographic Office. During the first six years of her career as a survey ship, she traveled more than 300,000 miles in her study of the North Atlantic and adjoining areas. In 1952, while crossing the Atlantic, she discovered and accurately positioned an underwater mountain range with peaks as much as 12,000 feet above the ocean floor. A month later, she discovered and charted a 7000-foot mountain near Bermuda. The following year, she became the first ship to anchor in over two and one-half miles of water.

In 1956, operational control of *Rehoboth* was shifted from COMSERVLANT to COMWESTSEAFRON. As she progressed northward from the Panama Canal she was diverted to an area northwest of the Galapagos Islands to help look for the lost raft *Cantuta*. After a four-day search in company with USNS *Greenville Victory*, the raft with its four men and one woman as passengers, was located. Since that time, *Rehoboth* has confined herself to her routine tasks.

CONSIDERABLE MODIFICATION is required to convert a seaplane tender into a survey ship. All armament, for example, has been removed from *Rehoboth*. Her forward 5-inch 38 gun mount has now been replaced with a deep-sea anchoring winch, and the after mount replaced by a completely equipped photographic laboratory which includes, among other items, a reproduction machine.

A high speed hydraulic winch handles most of the apparatus used for oceanographic measurement. A laboratory on the main deck is used for the preparation and handling of over-the-side equipment. Other specialized gear includes a chemical laboratory equipped for the chemical analysis of salt water samples, a drafting room and scientific office, and a recording lab which contains automatic recording equipment for current and weather observations.

Here is a more detailed description of some of her instruments and her duties.

• ***The Precision Depth Recorder.*** Hydrographic operations consist of a continuous plot of positions and recording of depths. Using navigation aids, the ship is conned along predetermined track lines by periodic fixes. At the same time, the Precision Depth Recorder indicates the depth on a continuous time scale.

Supersensitive sonar transceiver echo sounders, designed to record depths as great as 6000 fathoms, feed depth readings electronically to the PDR which maintains a continuous graphic presentation of the recorded soundings. This is how the depth is determined and recorded for any specific time and position.

Before any survey operation, charts—usually overlayed with acetate plastic sheets—are used for each type of navigational control the ship may be using. It is on these plastic sheets that the track lines are laid out, and the rough plot of fixes and soundings are kept. Normally the track lines are placed parallel, with distances between them varying with the detail desired.

After the area has been surveyed, these rough plots along with the sounding log books are sent to the drafting room where all the fixes and data are transferred onto a smooth plot chart. First the fixes are taken from the rough plot and transferred to the smooth plot. Next, all courses and speed changes are marked along the track between fixes. The next step is the location of soundings along the track line. Contours of the ocean bottom may then be drawn from the smooth plot of fixes and soundings.

• ***Oceanographic Station.*** These stations are positions at which a variety of oceanographic observations may be taken. The ship may either lie to or anchor while on the station. The most frequent type of observation is that in which temperatures of the water at several specific depths are measured.

This is done by means of a specially adapted water sampling bottle modified from that developed by Fridtjof Nansen, Norwegian explorer and oceanographer. Known as a Nansen bottle, it is a metal cylinder, fitted with tapered plug valves and clamps at each end, a bottle release mechanism at one end and a messenger release at the other, and a frame for two thermometers. The bottles are attached to a wire at specified intervals and lowered over the side, with the valves in the open position, thus flushing themselves during the lowering.

When the cast is at proper depth and all bottles are in the open position, a lead messenger is dropped down the wire, triggering the release mechanism of the top bottle. When this bottle is released, it in turn sends a pre-installed messenger to the next bottle. This continues until all bottles are released. As the bottles are released, they swing down in a 180-degree arc (now attached only by the clamp) and the valves close, thus trapping the sample of water, and the cast is ready to return to the surface.

Temperatures at the various depths are obtained with special deep-sea thermometers. These are precision instruments which are accurate to 0.01 degree C.

The thermometers are inserted into the frames and

GOING DOWN—Member *USS Rehoboth* (AGS 50) starts Nansen bottle into sea for temperature and salinity tests.

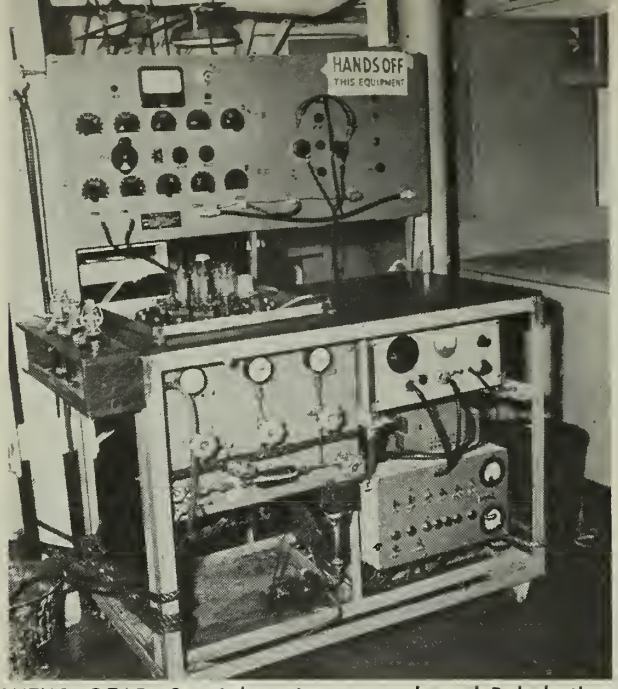
attached to the bottle with coil springs and rubber pads to provide protection against shock. Bottles are spaced at close intervals near the surface, since there are greater changes of temperature, salinity, oxygen and other variables in this region. At lower depths, bottles are usually spaced at greater intervals as the factors generally change slowly with increasing depth.

Pressure is an accurate measure of depth. The ocean's pressure influences thermometer reading and can be calculated. By using thermometers protected from this pressure, side-by-side with unprotected thermometers, the pressure at the depth of the bottles can be calculated from the difference in temperatures.

• ***The Salinity Bridge.*** The temperatures at the various depths can be read directly from the thermometers; but to determine the salinity of the sample, it must be subjected to chemical analysis. This is usually done by ordinary chemical methods. However, *Rehoboth* has recently had installed a salinity bridge, which determines salinity by comparison of the electrical conductivity of the unknown sample with that of a standard sample of approximately the same concentration.

• ***Bottom Samples.*** Actual samples of the bottom form

FLOOR SAMPLE—Sections of ocean bottom are taken from mud brought up by Ewing corer. They will be analyzed.



WEIRD GEAR—Special equipment on board *Rehoboth* puts ocean to test. *Left:* Salinity bridge. *Right:* Current meter.

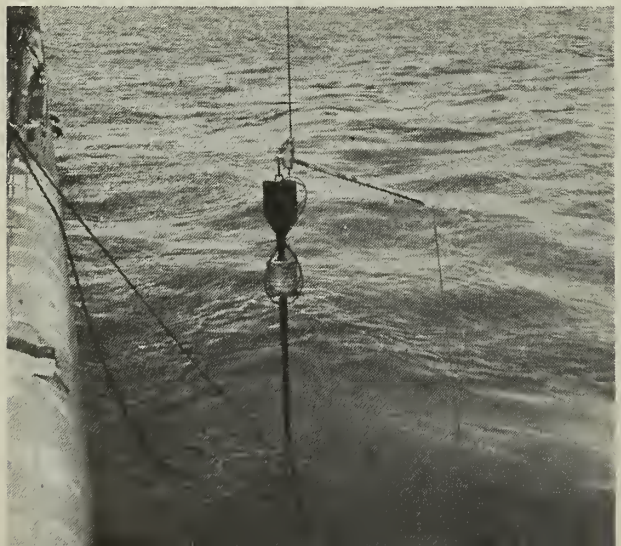
a second type of oceanographic observation made on ocean stations. These samples can be obtained by using several types of equipment *dredges, snappers* and *corers.*

Dredges are commonly used when the bottom is stony and heavy rocks may be encountered. Usually consisting of a metal box, open at one end and covered with a grate or wire mesh screen at the other, the dredge is simply dragged along the bottom by a moving ship until a sample is obtained.

Snappers, like dredges, are able to obtain samples only on the surface of the ocean's floor. Being smaller, they are used when the bottom is moderately smooth. Though there are many types of snappers, they may be described in general as spring-loaded devices designed to spring shut either upon contact with the bottom or upon some signal by the men lowering them. Even a small stone caught in the jaws of the snapper may allow the sample to be washed out as it is raised—somewhat of a drawback.

The corer is the most important and most frequently used type of bottom sampler, and is capable of taking samples of bottom sediments up to 90 feet long, leaving the original order and relative spacing of the layers nearly undisturbed.

WHAT'S BELOW—*USS Rehoboth* drops Ewing corer over to take sample of ocean's floor in waters near Wake.



In general, all corers consist of a steel body, streamlined lead weights to add impulse to the corer when it strikes the bottom, tail fins to direct the corer vertically into the bottom, and a steel coring tube. The tube itself is usually fitted with a sharp cutting end to make penetration of the bottom easier, valves on each end to prevent the sample from being washed out of the tube.

There is also an inner tube that allows the long core sample of the ocean's bottom to be removed intact for study.

Typical of the larger, more modern corers in use today is the so-called Kullenberg piston corer. It is of the design just described, weighs about 400 pounds complete, and can obtain samples of two to two-and-one-half inches in diameter and up to about 12 feet in length.

A larger modification of the Kullenberg corer, known as the Ewing piston corer, weighs about 1200 pounds and normally can obtain cores of about 20 feet. Record length cores of 90 feet have been obtained with this type.

• ***Current Meter.*** Still another type of observation made while on station is sub-surface current measurement. The Roberts current meter is an instrument designed to record sub-surface current speeds and also indicate the direction of flow. With the ship at anchor, the current meter can be suspended at any desired depth and will align itself with the direction of the current.

A magnetic compass is enclosed within the body of the device and a screw type impeller on the nose of the meter is driven by the current. Electronic signals from the compass and impeller travel through the suspension cable and the velocity and the direction of the current is automatically noted on a continuous chronograph recorder.

• ***Oceanographic Winch.*** To handle various pieces of

over-the side equipment, a new oceanographic winch, located on the port side aft on the main deck of *Rehoboth* was designed by the Hydrographic Office.

This winch carries 20,000 feet of wire and is designed to hoist and lower the entire wire, 15 water sampling bottles, and a 250-pound weight at an average speed of 500 feet per minute.

While hoisting or lowering, an automatic tension feature relieves the wire of any excessive strain due to rolling and pitching of the ship. An infinite number of speed positions are available between creeping speeds of 10 feet per minute to full speed in either direction.

For accurate survey operations, accurate navigational control is a necessity. *Rehoboth* uses many different systems for its various operations, some of which are conventional systems and others relatively unknown. These systems, *Lorac, Shoran, E.P.I.* and standard *Loran,* can be classified into two categories according to the type of pattern generated; either circular (distance measuring) or hyperbolic (distance difference measuring).

The *Lorac* (LOnge Range ACcuracy) system, very similar to Loran, consists of one center station transmitter and two end station transmitters. Here's a technical explanation: The radio frequency energy radiated from these fixed stations establishes a radio wave interference pattern, hyperbolic in nature, from the vicinity of the station outward. The radiation pattern may be plotted on a geographical map as a grid composed of intersecting hyperbolic lines.

The *Shoran* (SHOrt RAnge Navigation) system is a pulsed circular system operating in the ultra-high frequency band. It is capable of excellent relative and absolute accuracies within a range limited approximately to the optical horizon. The basic *Shoran* system consists of two fixed stations and a transmitter-receiver indicator aboard ship.

The *Electronic Position Indicator* (E.P.I.) is a pulsed circular system operating in the 1800-1900 kilocycle frequency band. This system consists of a shore station and a transmitter-receiver aboard ship. The transmitter aboard ship sends out a pulse which triggers the transmitter at the shore station. The pulse sent out by the shore station is received by the ship and is synchronized manually with the original pulse sent out by the

The Mystery of the Phantom Bottom

DURING WORLD WAR II echo sounders had been widely used by the Navy to obtain accurate records of deep water off the California coast. But it was discovered that the bottom wouldn't stand still. Even though it was positive that, at a given spot, the bottom was, for example, at 1000 fathoms, they would get readings of 700, 400, 300 fathoms. Something fishy here, it was decided.

To be more precise, something —it has not yet been determined precisely what—was reflecting a portion of the echo sounder's signal from intermediate depths. It was known, of course, that such equipment had recorded schools of fish, but whatever it was that reflected the sound waves in this instance covered an area much too large for any university—much less school—of fish. Varying from 150 to 250 fathoms beneath the surface, this layer was continuously recorded over an area almost 300 miles wide.

This unknown layer was first called the ECR layer, derived from the names of the three men—C. F. Eyring, R. J. Christensen, and R. W. Raitt—who had made the discovery while operating the echo sounder aboard USS *Jasper* (PC 486).

Many tentative explanations followed. Some thought it marked the boundary between two layers of water, one more saline, perhaps, or different in temperature. Others preferred to think of it as the presence of life of some sort in enormous quantities.

Then the oceanographic vessel *E. W. Scripps* found that whatever sent back the echoes moved upward and downward in rhythmic fashion. It came near the surface at night, dropped back into deep water during the day.

More reports began to come in and, instead of being referred to as the ECR layer, it was called "scattering layer" or "phantom bottom." It was learned that the phenomenon was not peculiar to the California coast but occurs almost universally in deep ocean basins. In the daytime, it descends to several hundred fathoms, rises to the surface at night then, before sunrise, the layer drops back to the depths.

In 1947, USS *Henderson* (DD 785) bound from San Diego to the Antarctic, detected the layer during the greater part of every day at depths varying from 150 to 450 fathoms. Later, on a run from San Diego to Yokosuka, *Henderson's* fathometer again recorded the layer every day, suggesting that the layer existed almost continuously across the Pacific.

During the same year, USS *Nereus* (AS 17) ran a profile from Pearl Harbor to the Arctic and found the layer over all deep waters on her course. It did not appear in the shallow northern seas. At times, *Nereus* found *two* layers. Each reacted in different ways to the light of day. No reports have been made, apparently, on the difference in depth reached by the layers on foggy or sunny days.

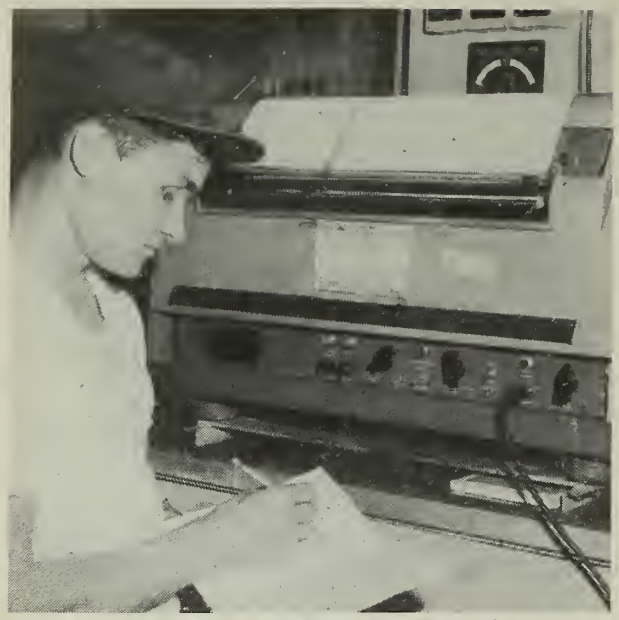
As yet, no one quite knows—or, if they know, they aren't talking —just what composes the layer. It can't be sampled or photographed with any assurance that the object captured by net or on film is the same that makes up the layer.

It is now generally assumed that the layer consists of animals of some sort and may be either plankton (small, passively floating or weakly swimming plant and animal life), shrimps, fish or squid.

In any event, it would appear that the so-called phantom bottom consists of tiny living organisms of some sort (or perhaps of many varieties) in such quantities as to repel the sound beam of the fathometer.

Until the discovery of the phantom bottom, it was assumed that most sea life frequented the relatively shallow waters of the continental shelf.

Now, we're not so sure.



ON THE BEAM—Positive Depth Recorder sends electronic radio beam to ocean's floor and records depth of sea.

ship. By synchronization of the two pulses there is established a time difference measured in micro-seconds between the first transmission and reception of the signal of the shore station. The time difference establishes distance and can be plotted relative to the shore station. *E.P.I.* is a long-range system and may be used for ranges as great as 400 miles dependent on atmospheric conditions.

Loran (LOng RAnge Navigation) is a pulsed hyperbolic system which is designed primarily for general purpose navigation, and is usually used for survey operations only at great distances from land. With modification, it may be used for more accurate short range operations.

Using these systems, either separately or concurrently, *Rehoboth* may obtain position fixes with accuracies up to plus or minus five feet. Usually, the accuracy is limited more by human error and plotting techniques than by electronic deficiency.

• ***Logistics.*** During survey operations the ship's Supply Department has its problems. A large amount of electronic equipment often has to be installed which does not belong to the ship or even to the Navy. It may be brought aboard only for the duration of one operation. With all this electronic gear aboard, there is a constant, heavy consumption of electronic spare parts.

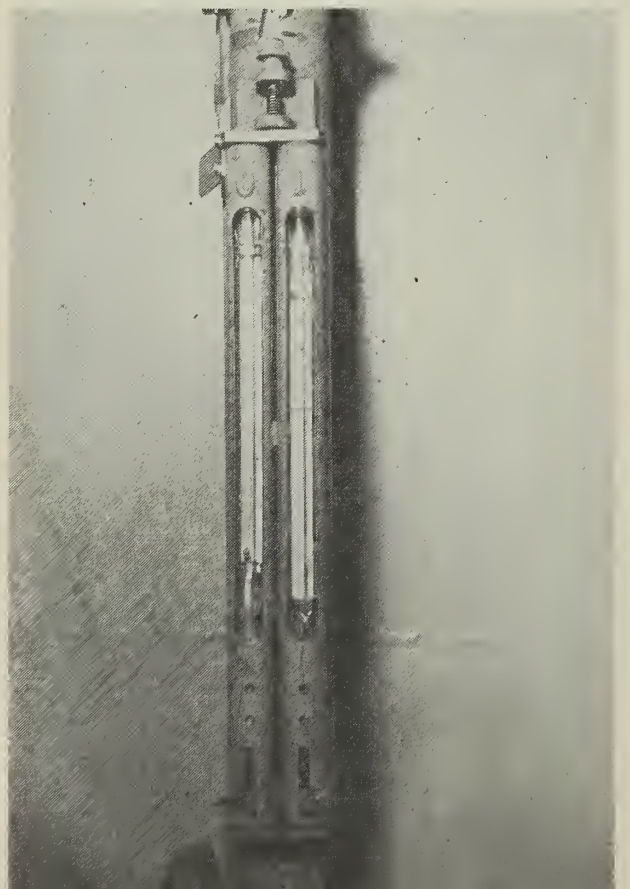
Although many spares accompany this civilian equipment when it is brought aboard, supply is very often inadequate. Also, the list of accompanying spares is quite often unrealistic. Some of the most frequently used parts are not included and other parts that never need to be replaced, are.

At 1400 on the day before departure on a recent operation a truck drove out on the pier. The men brought seven cases of electronic gear aboard and said that it was to be installed before the deployment. Eventually the material was identified, and all that was needed to install it was an additional 11 days in the shipyard.

Automatic shipments also provide a bit of a problem. At times big wooden cases arrive without anyone's being previously informed. These cases are usually unmarked. In such instances, there is only thing to do; hold the crates and hope that someone will eventually come aboard, spot the material and identify it.

As *Rehoboth* operations are rarely in conjunction with other U.S. Navy ships, qualifying her crew for various routine Fleet functions presents a problem. On the other hand, the knowledge of the composition of the oceans gained by a tour in *Rehoboth* is of everlasting benefit.

This may be said for the entire crew. Nowhere else in the Navy can anyone learn more of properties of potential battle fields than on *Rehoboth* or her sisters.



SISTERS—*USS Rehoboth* and *USS San Pablo* (AGS 30) stop at Monaco. *Rehoboth's* gun has been replaced with deep-sea anchoring winch. *Left:* Deep sea thermometer.

BOOKS

SUBJECTS RANGE FROM AMERICAN REVOLUTION TO WORLD WAR II

THERE ARE PLENTY of World War II yarns in this month's books selected for review. However, for change of pace—and time—you can go back to the American Revolution or Elizabethan England and, if you really prefer oldies, to the days of Attila. Many of these, and others, can be found in your ship or station library.

Two biographies are included — ***Memoirs: Ten Years and Twenty Days,*** by Grand Admiral Karl Doenitz; and ***Orde Wingate,*** by Christopher Sykes. As might be expected, the *Memoirs* of Admiral Doenitz are well-nigh the official history of the German U-boat service which he recreated in 1935 and which he commanded until 1943, when he became commander-in-chief of the navy. They describe the sub strategies evolved by Doenitz which, if followed more closely, might well have altered the outcome of the war. He also tells of his quarrels with the German High Command and his relations with Hitler, Himmler and Goering. He explains his attitude toward the General's Plot of July 1944, and to the concentration camps (he never heard of them). In the final part of his book he tells of the last days of the Third Reich, when he directed Germany's surrender after Hitler's death.

Wingate was as much an eccentric and mystic as Doenitz was a by-the-book man. An excellent leader of men, he was also a man who had the facility of arousing the enmity and anger of some and the unstinted admiration and support of others. In Palestine, when he first showed his military ability in the organization of special patrols against the Arabs, he was deeply devoted to the cause of Zionism. In Ethiopia, where he was commander of the troops in the immediate service of Haile Selassie, his campaign played a large part in the Italian defeat. However, he really reached his peak in his leadership of the Chindits when the British prospects in Burma were at their most dismal. He was killed, at 41, in an airplane disaster in 1944. Sykes has written an official biography based on three and one half years of research, journeys to the scenes of Wingate's three major campaigns, and family papers.

Destroyer Squadron 23, by Ken Jones, should be of interest to every Navyman for it is the story of Arleigh Burke's destroyer squadron in World War II. "Move quickly; look for fights; be ready when you find one." With these orders to the skippers of his eight destroyers, the then Commodore Burke assumed command of DesRon 23 in the South Pacific in October 1943. Jones gives much personal background and many anecdotes in his book, but he is primarily concerned with an investigation of the problem of *why* DesRon 23 was such a hot squadron. (It boils down to personal leadership.) In his search, Jones provides a study in the depth of naval warfare and the men who fight it. The battles of Tassafaronga, Savo Island and Empress Augusta Bay are described. Details on strategy and tactics show what kind of men composed Squadron 23 and how they got that way.

And this is a good time to mention ***Armada,*** by Garrett Mattingly. The story of the defeat of the Spanish Armada has often been told, but this presents the event—not only the first modern naval battle, but a major step in the birth of modern Europe — in an entirely different light. School books for generations have either painted it as a triumph of British naval forces and the beginnings of Britain's mastery of the sea, or a chance victory brought about by a storm. Not so, says Mattingly. The actual battle, such as it was, between Spanish and English ships was only one phase in the diplomatic jockeying between the nations of Europe. There were days of random brushes and occasional conflicts, with disappointments on both sides. The Spaniards did not achieve their objectives but, on the other hand, neither did the English. There was no real victory and no real defeat but, says Mattingly, nothing was ever quite the same again for all of Europe. A thoroughly satisfactory book for any reader who enjoys history.

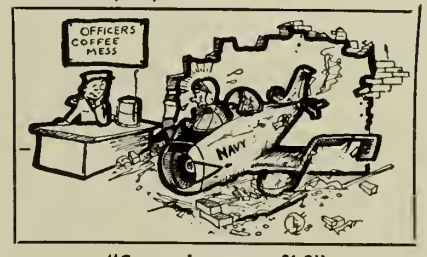
And now for a brief return to World War II with ***Battle: The Story of the Bulge*** by John Toland. This is a you-were-there account of one of the most dramatic battles of World War II. Both sides are covered. Hard fighting, heroism and mercy are described. Trapped by circumstances, hundreds of thousands of civilians and soldiers meet the greatest crisis of their lives. The story of the Bulge is told in terms of what they did, what they said and what happened to them. However, the larger picture is also presented. Toland suggests that Hitler was defeated at this point not because of any well laid plans of the big Allied commanders but, rather, because of the thousands of little actions of many thousands of little soldiers.

Little people is also the subject of ***What Manner of Men*** by Fred J. Cook. In this book on "forgotten heroes of the American Revolution" the author offers brief biographies, based on letters and contemporary documents, of 15 "little" men and women who played a part in the Revolution and who are now almost forgotten. Some are spectacular rather than important; others did much to bring victory to the Colonists.

Two items of fiction — ***Dark Sea Running,*** by George Morrill, and ***The Darkness and the Dawn,*** by Thomas B. Costain—are also included in this month's selection.

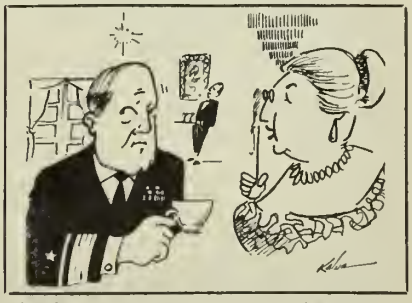
Dark Sea Running is concerned with a merchant marine tanker during World War II. *Darkness and Dawn* centers about the struggle for power between Attila the Hun and the Roman dictator of that time.

All-Navy Cartoon Contest
A. J. Malta, SN, USN



"Cream 'n sugar, Sir?"

All Navy Cartoon Contest
Peter H. Kalua, AA, USN



"Pardon me, but are you in the Navy?"

TAFFRAIL TALK

ONE OF THE NICE things about being a journalist is the people you meet. The reason for this cliche is a visit to ALL HANDS by Captain Eddie Peabody, USNR. It took no time at all for just about the entire staff to become convinced that he's quite a guy.

As we estimated the situation, viewed through the flicker of electronic flash guns, the twanging of his banjo, sea stories and hordes of old friends, Captain Peabody spends about 20 hours a day—whether on active or inactive duty—selling the Navy and its works to anyone who will listen and many who do not. We came to the conclusion that his banjo, in the proper hands, is an effective weapon.

Although he is now a glamor boy primarily concerned with promoting the Navy by means of his banjo, Captain Peabody is thoroughly familiar with the more pedestrian aspects of naval activities. As a high school graduate of Lynn, Mass., he enlisted in the Navy in 1917 as an apprentice seaman. By 1921, he had made QM2 after he had served in USS *Nebraska*, in submarine chasers and submarines, ending this phase of his service in USS *S-14*. (He still wears the dolphins of a submariner.) During World War II, as a commander, USNR, he organized and trained bands in all the submarine bases in the Pacific and personally supervised more than 6000 shows presented in bases, hospitals and ships in that area.

A trouper for years and years, he has played in motion pictures, made phonograph records and established an international reputation as a banjo virtuoso in radio, television and vaudeville. One of his proudest honors is his membership as Life Eagle and Eagle Scout in the Boy Scouts.

★ ★ ★

There must be something about subs not apparent to ordinary mortals. Not too long ago we heard of a TM1, Robert Matheny, who, by choice, spent 14 years on board the same boat—USS *Catfish* (SS 339). After shopping around a bit on USS *Cuttlefish* (SS 171), *Whale* (SS 239) and *Pampanito* (SS 383) he finally found his true love in *Catfish* when he helped commission her in 1945. He stayed with her until he retired this October.

★ ★ ★

Old timers who still recall the days of salt beef and hardtack will probably flip their lids when they hear of or see, the new enlisted subsistence building at NAS Corpus Christi. It cost more than $1,500,000 and includes such tasty items as continuous serving lines, public address, hi-fi and music systems, drapes, air conditioning, four-place 36-by-48-inch tables, individual chairs, 16-by-20 serving trays, plastic dishes, cups, bowls, plates, water glasses and galley equipment which is a far cry from the days when beans were beans, and three times a day too. Chiefs and PO1s will have their own reserved dining spaces.

Nope, the Old Navee isn't what it used to be.

The All Hands Staff

The United States Navy

Guardian of Our Country

The United States Navy is responsible for maintaining control of the sea and is a ready force on watch at home and overseas, capable of strong action to preserve the peace or of instant offensive action to win in war.

It is upon the maintenance of this control that our country's glorious future depends. The United States Navy exists to make it so.

We Serve with Honor

Tradition, valor and victory are the Navy's heritage from the past. To these may be added dedication, discipline and vigilance as the watchwords of the present and future. At home or on distant stations, we serve with pride, confident in the respect of our country, our shipmates, and our families. Our responsibilities sober us; our adversities strengthen us.

Service to God and Country is our special privilege. We serve with honor.

The Future of the Navy

The Navy will always employ new weapons, new techniques and greater power to protect and defend the United States on the sea, under the sea, and in the air.

Now and in the future, control of the sea gives the United States her greatest advantage for the maintenance of peace and for victory in war. Mobility, surprise, dispersal and offensive power are the keynotes of the new Navy. The roots of the Navy lie in a strong belief in the future, in continued dedication to our tasks, and in reflection on our heritage from the past. Never have our opportunities and our responsibilities been greater.

ALL HANDS the Bureau of Naval Personnel Information Bulletin, is published monthly by the Bureau of Naval Personnel for the information and interest of the naval service as a whole. Use of funds for printing of this publication is approved by the Director of the Bureau of the Budget 25 June 1958. Opinions expressed are not necessarily those of the Navy Department. Reference to regulations, orders and directives is for information only and does not by publication herein constitute authority for action. All original material may be reprinted as desired if proper credit is given ALL HANDS. Original articles of general interest may be forwarded to the Editor.

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The Bureau invites requests for additional copies as necessary to comply with the basic directive. This magazine is intended for all hands and commanding officers should take necessary steps to make it available accordingly.

The Bureau should be kept informed of changes in the number of copies required.

The Bureau should also be advised if the full number of copies is not received regularly.

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Distribution to Marine Corps personnel is effected by the Commandant U. S. Marine Corps. Request from Marine Activities should be addressed to the Commandant.

PERSONAL COPIES: This magazine is for sale by Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. The rate for ALL HANDS is 25 cents per copy; subscription price $2.50 a year, domestic (including FPO and APO addresses for overseas mail); $3.50 foreign. Remittances should be made to the Superintendent of Documents. Subscriptions are accepted for one year only.

• AT RIGHT: YUM YUM — K. L. Thompson, CS1, of USS *Bon Homme Richard* (CVA 31) believes 'the better it looks—the better it tastes' and shows what he means with his decorated salad bar and serving line.

TEAMWORK

SHOWS ON YOUR RECORD

ALL HANDS

DECEMBER 1959

ALL HANDS

THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN

DECEMBER 1959 Nav-Pers-O NUMBER 515

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• **FRONT COVER: SCOPE OF IT**—Radarman L. P. McLawhorn, RD1, USN, follows the track of an air contact as USS *Pillsbury* (DER 133) patrols the Atlantic barrier.

• **AT LEFT: PLEASANT PAUSE**—Ships of the Sixth Fleet drop anchor off shore at Rhodes, Greece for enjoyable break in shipboard routine during operations in the Med.

• **CREDITS:** All photographs published in ALL HANDS are official Department of Defense Photos unless otherwise designated.

SUMMER WONDERLAND

ANTARCTIC RESUPPLY FORCES began leaving U. S. seaports and airfields early this fall in support of the United States Antarctic Research Program.

Eight ships, three dozen aircraft and some 3000 men will be involved in the operation, code-named Operation Deep Freeze 60. (Four previous expeditions were called Operation Deep Freeze I, II, III and IV, but the identifying number was changed this year to coincide with the fiscal year—July to July—the time span of each operation. Next year's operation will be Deep Freeze 61.)

The ships include icebreakers, cargo carriers and an oiler. The planes range from the Navy's ski-equipped R4D *Skytrains* to the Air Force's C-124 *Globemasters* and ski-equipped turbo-prop C-130 *Hercules*. The C-130s will be used for the first time in Antarctic operations.

Primary mission of Deep Freeze 60 is to continue support of the U. S. Antarctic Research Program (USARP) which is administered by the National Science Foundation. This means bringing in new personnel and fresh supplies for four American Antarctic scientific stations which are being maintained indefinitely, supporting summer scientific efforts, and constructing new buildings to increase livability and scientific projects.

THE FOUR U. S. STATIONS operating on a year-round basis are: *South Pole Station*, located at the geographical pole almost 10,000 feet above sea level; *Naval Air Facility McMurdo Sound*, principal cargo staging base for the operation as well as a limited scientific station, located on the west coast of the Ross Sea; *Byrd Station*, in the heart of Marie Byrd Land; and *Hallet Station*, on Cape Hallett in the Ross Sea, which is jointly supported by New Zealand and the United States.

Two seasonal auxiliary air facilities for summer support of flight and field operations will be set up. One will be at the foot of the Beardmore glacier *(NAAF Beardmore)* and one at the half-way point between NAF McMurdo and Byrd Station *(NAAF Little Rockford)*. In addition, *Little America V*, on the edge of the Ross Ice Shelf, will be used to salvage equipment.

A second mission has been assigned to ships of Operation Deep Freeze 60. Two icebreakers, USS

Glacier (AGB 4) and USS *Burton Island* (AGB 1), will attempt in February to penetrate to the Bellingshausen-Amundsen Sea coasts to obtain oceanographic, cartographic and geographical data of that area. Located on the side of the continent below South America, the Bellingshausen-Amundsen Seas are heavily clogged with ice for most of the year and have never before been navigated by ships.

THE WINTER POPULATION at the four main stations is 191. Twenty-eight of these are scientists and the remainder naval officers and men.

Summer operations will wind up in early March 1960 when another group of Americans will remain in Antarctica to winter over. (Remember, when it's winter up here it's summer down there.)

Planes of the Navy's Air Development Squadron Six (VX-6) from Quonset Point, R. I., and the Air Force's Ninth Troop Carrier Squadron from Donaldson Air Force Base, Greenville, S. C., commenced flying in to McMurdo about 1 October.

Ships of Task Force 43 will begin their unloading and loading operations in Antarctica on or about 10 December. They will all stage through New Zealand ports.

Summer Station Operations
(*October—March*)

South Pole: *Globemasters* began air-dropping 650 tons of equipment, drummed fuel, aviation gasoline, provisions, and other supplies about 1 November. The largest item to be air-dropped is a 16,000-lb D-4 tractor. The tractor is needed to prepare a runway in February for landing C-130 planes which will bring in new buildings for Pole Station. Five buildings are scheduled for construction.

Seventeen men who have been wintering over at the South Pole were to be relieved in late November and flown out to McMurdo and then to the United States. Their reliefs will be flown in by planes of VX-6, which will also carry items of equipment considered too delicate to air-drop.

Byrd Station: Cargo planes began the air-drop at Byrd Station in mid-October, depositing approximately 800 tons of supplies, fuel and provisions. In late December a tractor train from Little America will arrive at Byrd Station with heavy equipment and two new buildings. In February, Air Force C-130s will deliver two more buildings.

AS ANTARCTIC SUMMER approaches, Navy ships and men again set courses in general direction of South Pole. Operation Deep Freeze 60 is underway.

Hallett Station: The cargo ship USS *Arneb* (AKA 56) is scheduled to arrive at Cape Hallett with an icebreaker escort in early January to off-load supplies and equipment. It will be an amphibious operation. The wintering-over party was flown out earlier. No new construction is planned for Hallett Station.

NAF McMurdo Sound: Navy Seabees will again prepare a runway 6000 feet long on the bay ice of McMurdo Sound. The 90-ton *Globemasters* will load cargo on this strip for the air-drops at Pole and Byrd Stations. The Seabees will also prepare an emergency runway on the ice in the Marble Point area before the season's operations.

The icebreaker USS *Atka* (AGB 3) will arrive at McMurdo on 10 December and commence preparing a channel and off-loading site. *Arneb*, after picking up heavy vehicles at

ALL THE TRIMMINGS—Navymen at Ellsworth Station take time out to enjoy their Thanksgiving dinner as chief cook E. H. Davis dishes out the turkey.

CLOSE SHAVE—Navy supply sled has close call with crevasse as scientific team moves to study interior. Unloaded sled was pulled out by sno-cats.

Little America, will arrive at McMurdo about 15 December in company with *Glacier* to begin off-loading.

All of the 135 men who wintered over at McMurdo are back in CONUS, in time for Thanksgiving turkey—and a white Christmas.

A major construction program is planned for McMurdo this year. Slated to go up are three 250,000-gallon fuel storage tanks, four barracks buildings, a hangar foundation, two communications buildings, a garage, three storage buildings, a fire house, two scientific buildings and three general purpose buildings.

Navy Air Development Squadron Six (VX-6): VX-6 aircraft departed the United States to be in New Zealand by mid-September, to prepare for the first fly-in to Antarctica about 1 October. The 21-plane squadron is air-lifting personnel and light cargo to the various Antarctic stations and will carry supplies to Navy tractor trains and USARP science traverse parties. They will also make reconnaissance flights ahead of tractor and traverse parties to locate rough terrain and dangerous crevassed areas.

Their long-range planes will fly photographic missions over previously unmapped areas. The squadron will additionally be responsible for search and rescue operations in Antarctica. Except for SAR requirements, planes of VX-6 will not fly into the Antarctic until the Air Force has completed most of its air-drops because of the crowded conditions at McMurdo. The R7V will ferry passengers and cargo between New Zealand and McMurdo, however.

Air Force Participation: Ninth Troop Carrier Squadron (Heavy) *Globemasters* will carry out a variety of missions for Deep Freeze. The ten planes have been air-lifting personnel and priority cargo from the ice of McMurdo Sound, making round trips to Pole and Byrd Stations, dropping upward of 10 tons of cargo per trip. Air-drop operations were to be completed this month.

Two *Rescuemasters* will stand by in Christchurch for SAR operations between New Zealand and Antarctica.

Four Air Force *Hercules* will

COOL CEREMONY—Sno-cats and other Antarctic vehicles pass in review to honor departure of RADM G. J. Dufek.

make their Antarctic debut in February. Developed by the Air Force for use in Arctic regions, the *Hercules* can carry the payload of a *Globemaster* (10 tons) and has the added capability of landing on skis on snow runways. The turbo-prop planes are being called in to transport to Byrd and Pole Stations buildings and materials which will not arrive in Antarctica until after the normal flying season for wheeled aircraft.

Ship Operations

Captain Edwin A. McDonald, USN, Deputy Commander of Task Force 43, is in command of the ship group consisting of four icebreakers two cargo ships, one tanker and a destroyer escort picket ship. His ships carry the supplies necessary to maintain the four American bases for the next year, as well as the aviation gasoline required for operations.

The ships will also act as ocean station vessels to support aircraft flying between New Zealand and the Antarctic. USS *Peterson* (DE 152) maintains station about halfway between New Zealand and McMurdo (60°S—170°E) for the benefit of all aircraft making the 2100-mile over-water flight. *Peterson* is based in Dunedin, New Zealand.

In February, Captain McDonald will take two icebreakers through the ice pack to make the attempt to reach the Bellingshausen and Amundsen coasts.

The Little America - Byrd Station Tractor Train: On or about 15 December a heavy equipment tractor train is scheduled to depart Little America for Byrd.

Carrying supplies, fuel and provisions to make it self-sustaining, the train is a means of getting heavy equipment to Byrd Station for use in recovering air-dropped supplies and for leveling a runway.

One of the train's D-8 tractors will be left at Little Rockford on the way out. Personnel of the train will be flown back to McMurdo.

Victoria Land Traverse: A party of scientists left NAF McMurdo-Scott Base (New Zealand Base) in late October and proceeded up the Skelton Glacier to the Victoria Land Plateau, a vast, desolate, ice-capped expanse of 7000 to at least 9000 feet in elevation.

Their plan called for them to proceed in a northwesterly direction into the interior of the continent to a point about 74°S—140°E, from there to turn northeast to the Hallett Station area. Seismic gravity and glaciological studies will be made throughout the traverse and topographic control provided at such places as the party encounters mountainous terrain. The traverse is being supported by R4D fuel-caches placed at the top of the Skelton Glacier and will receive a *Globemaster* air drop about the first of this month. Vehicles will be left at the top of the Tucker Glacier (near Hallett Station) for later use and the party will be returned to McMurdo by R4D aircraft.

BREAK THROUGH—*USS Glacier* (AGB 4) breaks out Norwegian sealer that was icebound over five weeks while taking Belgian expedition to its base.

Marie Byrd Land Traverse: This party, equipped with three or four Snocats, left Byrd Station last month for a 1200-mile traverse that will take the party to the outer Marie Byrd Land coast near the Amundsen Sea and to the Executive Committee and Hal Flood Mountain Ranges where geological and geodetic studies will be conducted.

The party will then travel south to the Army-Navy Drive (trail between Little America and Byrd) at about Mile 200 and return to Byrd Station. It is expected that this party

DIG THIS—Navymen go about the task of digging out aircraft snowed in by storms of the Antarctic winter as they prepare for the summer's activities.

INTERNATIONAL FLAVOR—Navy captain, E. A. McDonald, CO of task group, chats with leader of Belgium polar expedition and skipper of Norwegian ship.

will be in the field until early February.

Airborne Traverse: An airborne traverse consisting of a number of landings along the 80th Meridian West will be made by R4D. This three-man party will examine the ice-cap between the Horliek and the Sentinel Mountains. Between eight and 12 landings will be made.

Bellingshausen Sea Expedition: There will be a two-ship expedition to the Bellingshausen Sea. It is expected that the National Science Foundation will support four to eight scientists who will participate. These scientists will conduct geological, biological and oceanographic studies and provide topographic control to various portions of the coast line and make a number of other observations, dependent on the area of the Amundsen-Bellingshausen seacoast penetrated.

Navy Surveys

Task Force ships will conduct hydrographic surveys throughout the operations. Sea ice will be studied and reported on and helicopters will be employed for photographic delineation of coastlines for the correction of current charts. In addition, topographic surveys will be undertaken in order to establish and verify landmark locations.

Naval Weather Service personnel will observe and record weather constantly both aboard ship and at several stations on the continent. Naval personnel are responsible for all weather programs at NAF McMurdo and Hallett Station during the entire year. At some seasons, Navy aerographer's mates are stationed at Byrd Station, NAAF Beardmore and NAAF Little Rockford to make surface and upper air observations and forecasts.

This year, an automatic weather station will be anchored between Australia and Antarctica and several land-type automatic stations, known as "grasshoppers," will be placed at various points on the continent. These stations will provide important weather information from unoccupied locations.

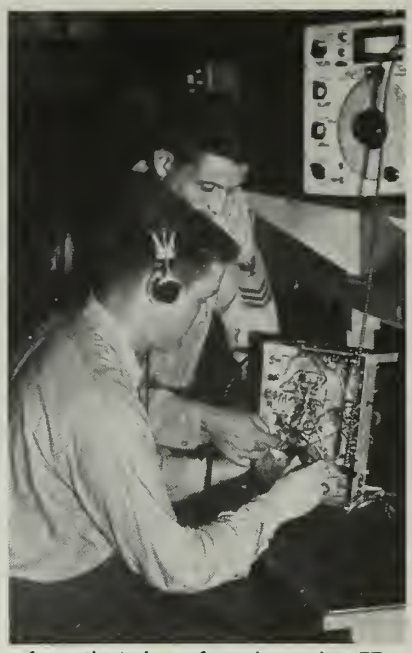
All in all, it will be a busy summer down Antarctic way.

WINTER WONDERLAND—Navy and Coast Guard icebreakers open up British base located on Palmer Peninsula.

TV on Ice

DOWN ANTARCTIC WAY where ships and men are constantly fighting the frigid elements, USS *Glacier* (AGB 4) has been experimenting with a new way to help her blaze a trail through ice-filled waters. She has been using a helicopter equipped with a television camera as a forward scout. As the copter flies ahead of the ship, the TV camera transmits a picture of ice conditions back to a screen aboard *Glacier,* enabling the icebreaker to pick the path of least resistance.

Top Left: Helicopter takes off from deck of *Glacier* to shoot pictures of ice conditions ahead. *Top Right:* LCDR H. R. Walker makes final adjustment on TV camera in copter's cockpit. *Right:* Copter pilot ENS T. H. Howarth, Jr., watches check-out of camera. *Lower Right: Glacier* makes her way through ice field. *Lower Left:* A. R. Cooks, RD1, turns on TV receiver in *Glacier* while keeping copter posted by radio.



ON LAND OR SEA when landing, one of a pilot's best friends is the ET and EN team that keeps GCA running.

GCA's Forgotten Men

ASK ANY PILOT who's ever been talked in for a landing. Aided by the magic of ground-controlled approach he has found his way through storm or fog onto a runway he can't see until the last few seconds.

He'll tell you, in no uncertain terms, that the unseen air controlman who used Air Surveillance and Precision Approach Radar to guide him home is a special kind of genius —and rightly so.

Our purpose, however, is to focus some deserved attention on another part of the GCA (Ground Control Approach) team — the electronics technicians and enginemen who repair and maintain the equipment which keeps the air controlman in business.

GCA equipment maintenance at any airfield or on board any aircraft carrier is the responsibility of an electronics maintenance officer and his crew of technicians and enginemen.

The usual GCA team is made up of three officers and about 19 sailors. Two of the officers are GCA duty officers, the third is the electronics maintenance officer. Usually, three of the enlisted men are electronics technicians, one an engineman, and the rest are controllers.

Upwards of 300 electronics technicians, more than 50 electronics maintenance officers, and some 55 enginemen are stationed at the 55 GCA units maintained at Navy air establishments throughout the world. These men are all graduates of the Navy's GCA maintenance training courses at the Naval Air Technical Training Unit, Olathe, Kans.

GCA TRAILERS make up a total of 32 of the 55 GCA units. They contain what the technicians familiarly refer to as the "AN/CPN-4" and "AN/MPN-5" radar systems, plus as many as 10 communication receivers and transmitters, and a recording device and direction finder. The entire unit, including diesel engine auxiliary power unit, air-conditioning equipment, heating system, tractor and trailer, weighs about 25 tons.

At an airfield the trailer is driven onto a fixed hardstand. Here the technician takes over, positioning, aligning and tuning the trailer, and adjusting transmitters and receivers for frequency and output.

Fifteen RATCC (Radar Air Traffic Control Centers) are installed at the Navy's major all-weather air stations. These are fixed units, ensconced in control towers, and much more complex and comprehensive than the GCA trailer type. Most RATCC installations use the AN/FPN-28 system.

The remaining eight units are of the Air Surveillance Radar (AN/GPN-6) type, normally installed only at seaplane bases. Seaplanes are capable of making blind landings, making precision radar unnecessary at these sites.

Each of these systems is so highly technical that technicians and enginemen are required to specialize in learning to repair and maintain just one of them. As a result, a student arrives at NATECHTRAU Olathe with orders to his ultimate GCA or RATCC station. The type of equipment he is trained to repair and maintain is the type which is in use at that station.

The Electronics Maintenance Training Course at Olathe is geared to instruct an input of 12 men every four weeks. Classes are intentionally kept small to permit the near-individual instruction required. Maximum emphasis is placed on practical training, with almost 80 per cent of the student's time devoted to actual work on equipment under close supervision.

ONLY THE MOST highly qualified "fleet radar experienced" electronics technicians second class and above and aviation electronics tech-

nicians second class and above are selected for the course. Most of them are graduates of previous "A," "B" and, in some cases, "C" schools, and have long since proved their qualifications in electronics. They are ordered to the program through Seavey and GCA assignment divisions of this Bureau.

Once arrived at Olathe, each man is interviewed and given a comprehensive "diagnostic" examination, covering the entire field of communications and radar electronics equipment. His background and ambitions are explored. He is informed of the career opportunities and responsibilities confronting him.

The concentrated 18-week course of electronics instruction to which they are assigned is divided into five phases. Each must be thoroughly mastered before the student progresses to the next.

During the first phase, students review typical radar and communications circuits using diagrams encountered later in the course on actual equipment. They learn what to the uninitiated is a whole new language. For example they cover *limiters, clampers,* types of *oscillators, multi-vibrators, modulators, time-delay* and *sweep circuits.* They get an explanation of all of the UHF, VHF, MHF, direction finder and recorder equipment, and an operational check-out on each.

PHASE TWO covers *search radar,* including the introduction of many advanced circuits such as the "moving target indicator" and "coherent oscillators." About 160 hours are equally divided between lab and classroom. Again, students work in the lab on equipment identical to that which they'll use later in a GCA or RATCC set-up.

Precision radar is covered in phase three. Since final aircraft approach to a GCA site is made on precision radar, the equipment encountered in this portion of the course demands and gets even more critical attention. More than two-thirds of the training time in this phase is spent in the lab and in complete GCA trailers.

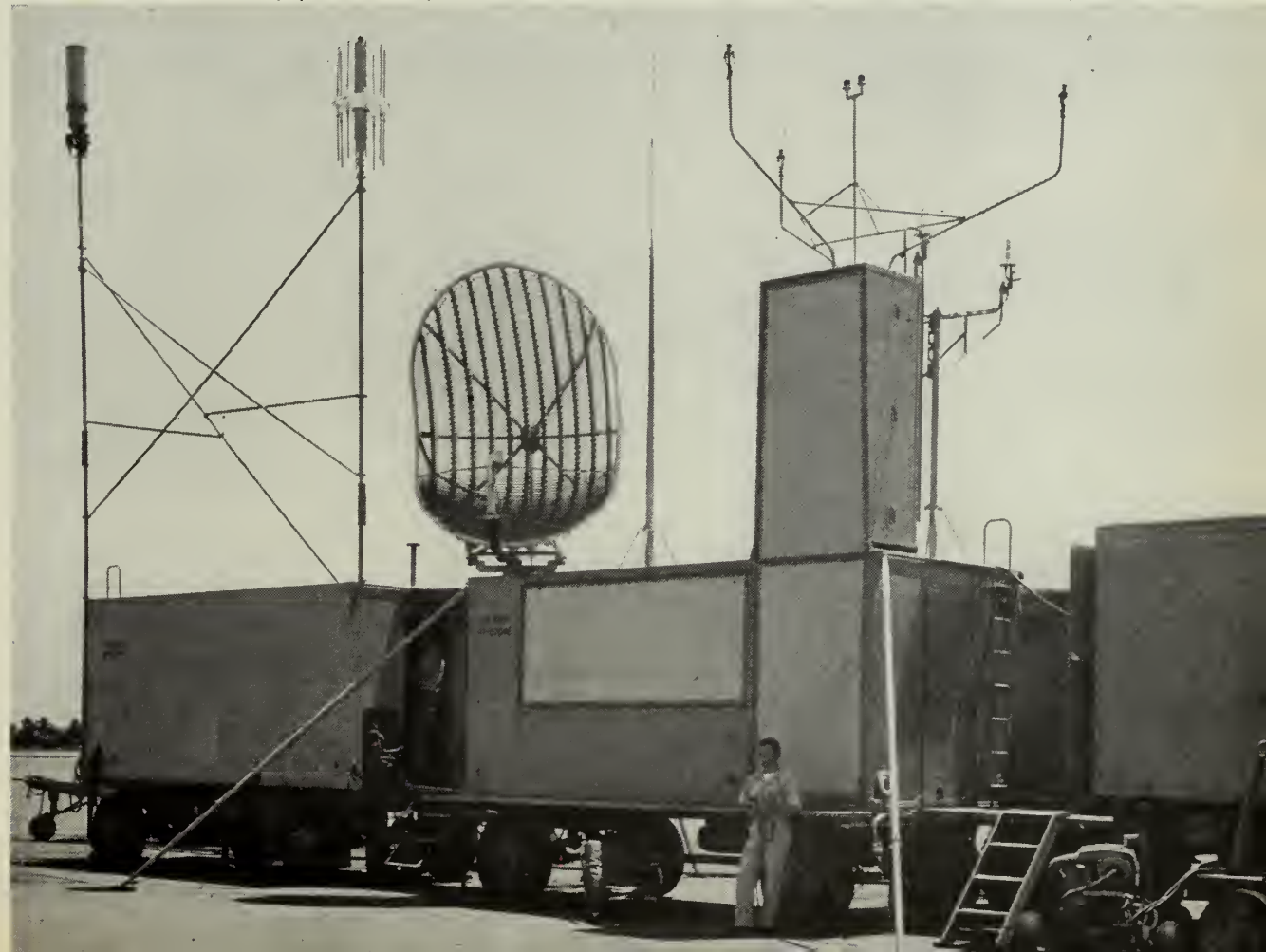
During phase four, the students learn to service search and precision antennas and indicators. Angle voltage generators, servo-systems, sweep circuits and deflection systems are covered in this unit of the course.

The final, or field, phase is an application of the entire GCA maintenance course. The major part of the students' time is spent in an operating GCA trailer, which has been positioned, aligned and tuned by the students themselves. They adjust transmitters and receivers, learn to keep maintenance logs, failure reports, records of equipment usage, and a spare parts inventory. They also become familiar with the supply organization peculiar to GCA.

DURING THIS FOUR-WEEK period in the field, the student "lives" GCA maintenance and alignment from bow to stern. He develops a feeling of confidence in himself and his equipment. He often has the opportunity of seeing aircraft actually making runs on equipment he has completely serviced and readied.

Students headed for a duty station using Air Surveillance Radar remain at the school for an additional four-week block of instruction after completion of the basic 18-week course.

BIG JOB—There are many parts to keep humming and stock to keep rolling in Ground Control Approach units.



SKILLED HANDS are specially trained to maintain GCA equipment. This includes rolling stock, auxiliary diesel engines, a variety of electrical gear.

They are given added instruction in maintenance techniques for intercommunications, various systems used, and tower communication equipment.

A close personal relationship exists between instructors and technician students at Olathe. Graduates of the GCA maintenance course are urged to think of NATECHTRAU as their "alma mater" and to keep in close touch for the exchange of information and suggestions regarding further improvement in maintenance training. The school constantly strives to include instruction on new equipment and advanced maintenance techniques.

WHILE THE INCLUSION of enginemen in the GCA program may seem strange, they are an important part of the maintenance team.

Diesel engine auxiliary power units, and air-conditioning equipment and heating systems associated with a GCA unit all require considerable upkeep and repair. The prime mover and rolling stock are also the responsibility of the maintenance crew. The Class "C" type of instruction which provides the skills demanded by this equipment is contained in the GCA Engineman Training Course at Olathe.

The course is 10 weeks long and is available to approximately six enginemen second class and above every eight weeks. As with other technicians, engineman trainees arrive at Olathe with ultimate duty station orders, and are instructed on the type of equipment in use at that station.

In the first phase the student is introduced to the new—to him—field of electrical machinery. He learns the repair and upkeep of motors, generators, starter circuits and all common electrical test equipment.

Phase two covers the checking, testing, trouble-shooting and maintenance of the main power equipment and its driver, fuel supply, cooling system, control panels and the seven-ton electrically driven air-conditioning plant.

Engineman maintenance trainees spend more than 80 hours putting all this instruction into actual practice in the field or operational portion of the course. Over and over again they practice starting, securing and daily check of all equipment, the keeping of logs, and proper positioning and driving procedures for the 25-ton GCA trailer. Each student is examined for a standard Navy driver's license.

Officers slated to become electronics maintenance officers get the same 18-week course as the bluejackets. The final four weeks is devoted to study of administrative procedures such as procurement of spare parts and equipment, training, and keeping of logs and records.

TECHNICIANS attached to GCA and RATCC installations take tremendous pride in their work, and are almost fanatical in their zeal to keep the equipment working at peak efficiency.

This is reflected in the complete confidence felt by Navy pilots, who are ready and willing to trust themselves to GCA guidance.

An example of just how well these men know their job and their equipment occurred not so long ago at a certain Navy airfield.

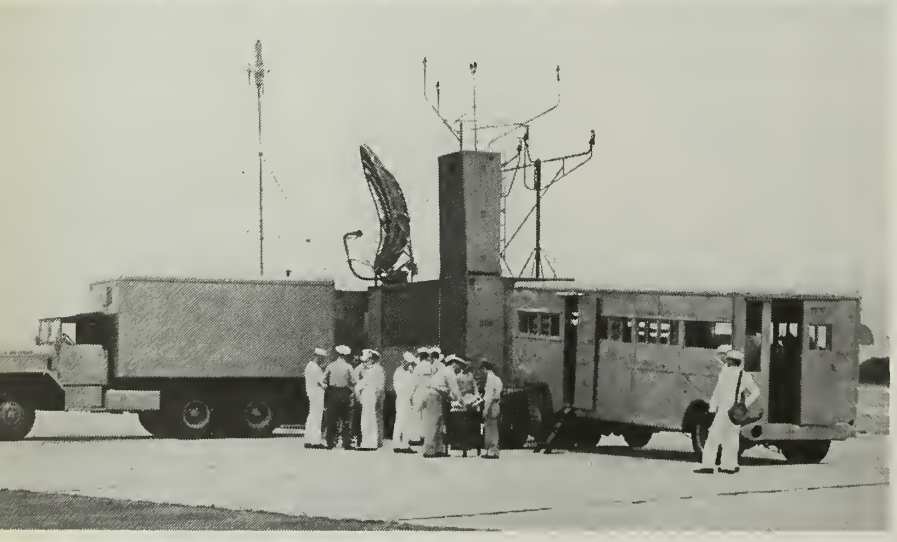
A plane had already begun its final approach to the landing strip when the GCA equipment commenced malfunctioning because of a blown tube.

In the space of a few seconds the technician was able to (1) diagnose the trouble, (2) locate the burned-out tube among the thousands involved, and (3), substitute a new tube from his ever-ready spare box (his coat pocket).

This bit of trouble-shooting under pressure was accomplished so fast the plane was able to continue its landing uninterrupted, rather than take a wave-off and make another approach.

—Jerry McConnell, JO1, USN

TEAM WORK—Team usually consisting of three officers and 19 sailors keeps GCA operating. Here, GCA team takes time to celebrate approach 60,000.



INSIDE JOB—H. F. Carey, TDAN, and J. J. Sailor, TD3, *(Rt)* man controls of F3D Flight Trainer and Space Simulator.

FLYING TRAILERS

TRADEVMEN at NAAS Chase Field are kept busy with two new trailer-van "flying machines," which contain training equipment that simulates fighter interceptor flying conditions for student pilots.

One of these trailers houses a weapons system trainer that has the type of fire control radar used by the Navy's all-weather fighters for air intercepts. Inside, the van is divided into three different sections. Up forward is the cockpit, the same as in an actual plane, with stations for both pilot and radar operator. The pilot flies his 'aircraft' under instrument conditions. The radar operator has a radar scope and controls.

Amidships in the trailer is the maze of wiring and gear used to set up the intercept problems for the pilot while the aft section contains the electronic computer that reacts to the movements of the pilot's controls and gives him instrument indications of flight.

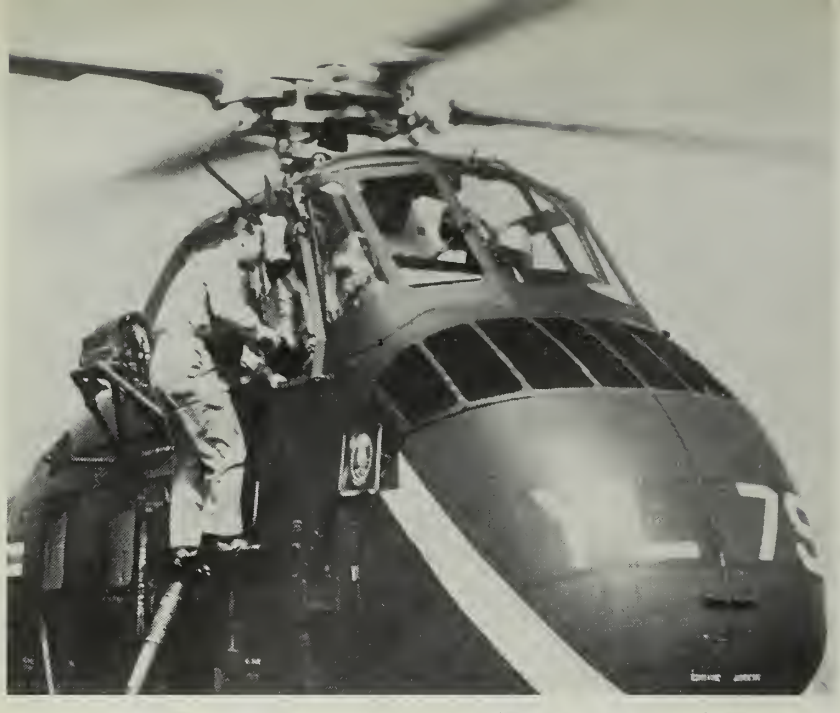
The second trailer contains the 15V5 space simulator. This unit computes altitude, relative bearing and range between fighter and bogey. From this information it generates a target that is fed onto the radar scope in the cockpit of the first trailer.

This training device enables student pilots to become proficient at radar interception without the cost and the danger of actually flying.

The white hats behind these devices wear the Tradevman's insignia. As a very important part of aviation training these Navymen are schooled in how to operate and maintain many complicated training aids.

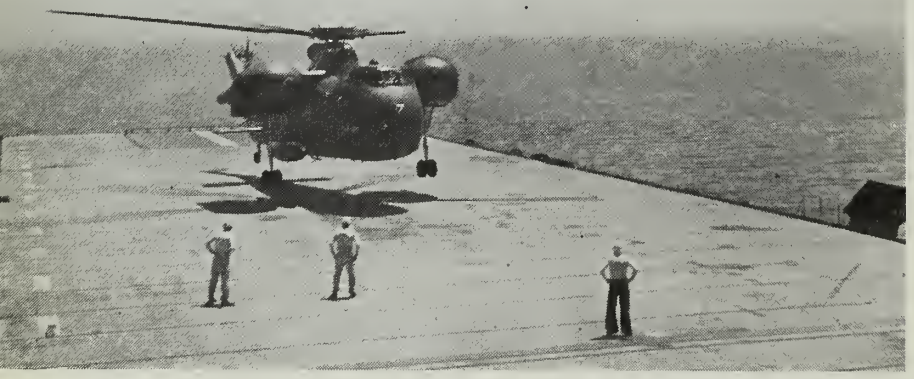
TDs also run training aids for other branches of the Navy.

FLYING HIGH—Student pilot takes over controls for simulated intercept flight in new trainer. *Above:* The training unit is housed in two vans.



NO ACCIDENT—CAPT C. E. Gibson, CO of *Thetis Bay*, congratulates LT R. L. Norton after 15,000th accident-free landing. *Below:* New copter is tested.

HEAVY HAUL—Copter airlifts jeep.



ARMY'S AT SEA—Soldiers board copter during operations off *Thetis Bay*.

Amphib

FIFTEEN THOUSAND accident-free landings is quite a record in any league—but when it's accomplished by helicopters aboard an amphibious assault ship it becomes an outstanding example of aerial artistry.

That many successful landings have been made aboard USS *Thetis Bay* (LPH 6). First Lieutenant R. L. Norton, USMC, flying an HUS with Marine Helicopter Transport Squadron 362, made the 15,000th landing recently during individual ship exercises off the coast of Okinawa.

Assault helicopter operations aboard LPHs demand the utmost in skill and precision. *Thetis Bay's* no-accident record has been racked up under all sorts of wind and deck conditions, day and night, during numerous amphibious exercises with units of the Pacific Fleet over the past three years.

The over-all helicopter casualty rate is three times that of fixed wing aircraft.

Thetis Bay, ex-CVE 90, was the first converted for the purpose of operating exclusively with helicopters. Her successful pioneering in the use of vertical envelopment tactics in cooperation with the Marine

HELICOPTER demonstrates rescue during operations with *USS Thetis Bay* (LPH 6). *Below:* Crew celebrates safety record.

Landings by Air

Corps has led the Navy to utilize two former CVSs, USS *Boxer* (LPH 4), ex-CVS 21, and *Princeton* (LPH 5), ex-CVS 37, as LPHs.

During her conversion in San Francisco Naval Shipyard, *Thetis Bay* had about 20 feet lopped off each end of her flight deck. Catapults, arresting gear and two centerline elevators were removed. The forward section of the hangar deck was converted into troop quarters, engine shops and spare parts stowage rooms.

An 18-ton aluminum aircraft elevator was installed, and the hangar deck reinforced. Piping and ventilation systems were redesigned, and more than two and a half miles of new ventilation ducting was installed.

Marine ammunition and equipment, stowed below decks, necessitated design of a new type of cargo elevator. It was built in two stages —the lower stage running from the first platform to the hangar deck, the upper stage traveling between the hangar deck and the flight deck on the port side of the ship.

Catwalks were widened so that combat-equipped troops could get from their compartments to helicopter embarkation points faster and easier. New maintenance facilities include a 12-ton hoist which can lift an entire copter, and a monorail hoist running athwartships the width of the hangar.

During a typical exercise, an entire Marine Helicopter Transport Squadron embarks in *Thetis Bay*. They fly HUS copters which can carry up to 12 troops. An external load could be a jeep, "mule" or nearly a ton of rations, ammunition, water, gas or other cargo carried in slings or baskets.

Upwards of 1000 fully equipped Marines, forming a Battalion Landing Team, go aboard for an operation.

D-Day begins with 0400 reveille for the entire ship. Flight quarters are sounded at 0430, and the first launch is made in early morning twilight. The helicopters are launched in groups of four. After rendezvousing they roar in to land at a predesignated spot, in one wave putting more than 140 combat-ready Marines on the beach. Returning to the ship, the copters land in formation in groups of four, load and take off again. The time involved in landing, gassing, reloading and takeoff is approximately the same as is required to read this article.

Because of *Thetis Bay's* short flight deck, two spots are used for external pickups. The cargo or vehicle is spotted, the helicopter hovers over it, and two men run underneath to make the hookup. This whole maneuver must be perfectly coordinated between pilot, signalman and hookup crew.

While launching and recovering, helicopters can be spotted either with the main rotor spread or folded. A crew can spread the four main blades and the tail pylon of an HUS and fold them again in less time than it takes to fuel the aircraft. With 16 or more HUSs operating at once, it becomes necessary to perform this spreading and folding many times over. But it pays off.

"...above and beyond

"FOR CONSPICUOUS GALLANTRY and intrepidity at the risk of his life above and beyond the call of duty. . . . He gallantly gave his life for his country . . ." the President said as he presented the Medal of Honor.

A proud moment—for this is the highest decoration that can be awarded in the nation. But it is won dearly. More often than not the Medal of Honor is presented to a member of the family rather than to the hero himself.

Deeds for which the Medal of Honor have been awarded are varied. A captain has gone down with his ship rather than surrender; another captain ordered his submarine to submerge while he lay wounded on deck; a first class petty officer dropped into a burning magazine to extinguish the flames and save his ship; and a mortally wounded seaman died struggling to steer his LST out of the path of an oncoming torpedo.

But not all Medals of Honor are awarded posthumously. A lone fighter pilot destroyed five of nine enemy bombers as they attacked his ship; a Navy lieutenant led a boarding party aboard a World War II German submarine that might have exploded at any moment; and a submarine captain took his ship within six miles of the Japanese fleet and sank five enemy destroyers in as many short-range torpedo attacks. Each survived.

FIFTY-FIVE U. S. Navy ships now in commission are named for Medal of Honor winners.

To add to a man's pride as a crew member of one of these ships, and to serve as a tribute to the traditions for which his ship stands, the Decorations and Medals Branch of the Bureau of Naval Personnel is sending to each of these ships a copy of the citation presented to the man for whom the ship is named.

The citation is embossed with a color print of the Medal of Honor. Accompanying this is a biography of the man who won the Medal. The citations are to be framed and displayed along with the biography of the Medal of Honor winner and a ship's history. (The citation and biography should reach all the ships before the end of this year.)

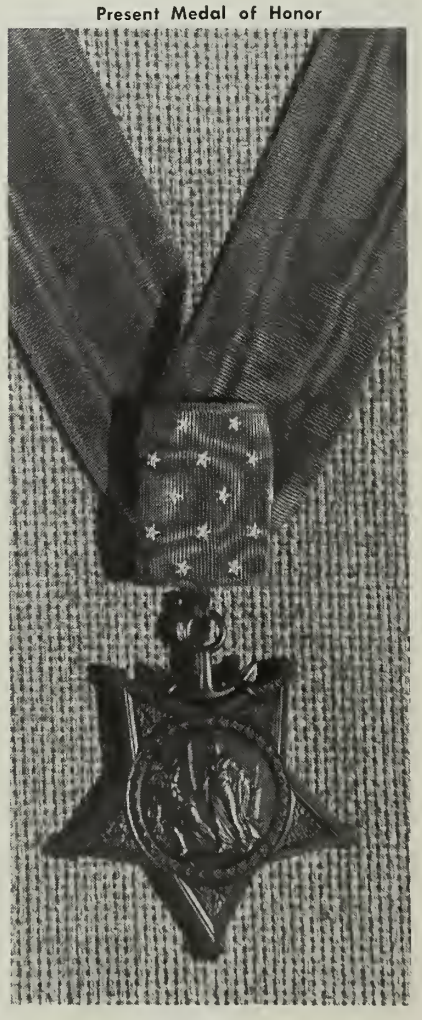
The first of these citations was sent to the submarine tender USS *Howard W. Gilmore* (AS 16). The story of CDR Gilmore is well known. But for those who are not familiar with it, or for those who may have forgotten the details, here's what happened:

Gilmore was commanding officer of the submarine USS *Growler* (SS 215) which was on her fourth war patrol in the Southwest Pacific in early 1943. It had been a successful patrol.

In spite of hostile air and anti-submarine attacks, *Growler* had sunk one Japanese freighter and damaged another by torpedo fire. Severe depth-charge attacks had been evaded after each action.

During the night of 7 Feb 1943, however, *Growler* was surfaced. Suddenly, from out of the darkness, an enemy gunboat bore down on her. CDR Gilmore, in a surprise move, maneuvered *Growler* to avoid being rammed and instead rammed the gunboat. At 17 knots, *Growler* opened a hole in the gunboat's hull.

Present Medal of Honor



As the enemy ship faltered, her crew members fired their machine guns in an effort to inflict further damage on the submarine and its crew. CDR Gilmore gave the order to clear the deck, allowing his men to precede him below.

Badly wounded, alone on deck, and unable to reach the ladder unaided, CDR Gilmore gave his last order—"Take her down." His well-trained crew submerged the damaged submarine and returned to port.

THE MEDAL OF HONOR went to Watertender First Class Elmer Charles Bigelow—USS *Bigelow* (DD 942) is named for him—for extraordinary heroism in putting out a magazine fire aboard USS *Fletcher* (DD 445).

The action started when an enemy shell exploded aboard, penetrated the number one magazine and set afire several powder cases. Bigelow grabbed two fire extinguishers and went below to quell the raging fire. With no time to get rescue breathing apparatus, he dropped into the burning magazine. Despite the acrid burning powder smoke which seared his lungs with every breath, he extinguished the fire. The following day, Bigelow died as a result of his injuries.

LT Edward Henry O'Hare—USS *O'Hare* (DDR 889) is named for him—won his Medal of Honor in the early days of WW II. On 20 Feb 1942, LT O'Hare single-handedly attacked nine enemy, twin-engine heavy bombers which were headed for his ship. Despite heavy machine-gun and cannon fire from the bombers, he shot down five of the planes and damaged a sixth before they reached the bomb release point.

Another naval aviator won the Medal of Honor in one of the most daring bombing runs of the war. LCDR Bruce Avery Van Voorhis, on 6 Jul 1943, took off in his PB4Y-1 patrol bomber, unescorted and in total darkness, on a 700-mile voluntary flight to Greenwich Island in the Solomon Islands.

the call"

Despite treacherous and varying winds, low visibility and difficult terrain, he fought a lone, but relentless battle to reach his target. He was continually under heavy attack from both the air and the ground.

He made six ground-level attacks to demolish the enemy's radio station, installations and antiaircraft guns and crews. He also destroyed one fighter plane in the air and three more in the water.

Even then, enemy fire didn't shoot down Van Voorhis' plane. He was finally caught in his own bomb blast and crashed in the lagoon off the beach.

BATTLE SCENE—Many brave deeds were performed by Navymen in WW II. One hundred thirty eight Medals of Honor were awarded Navymen, Marines.

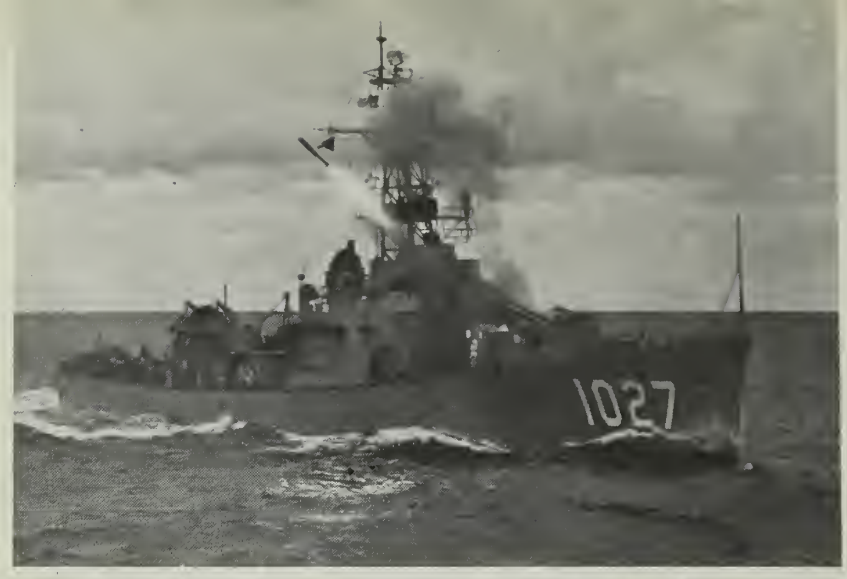
ON IWO JIMA a Navy pharmacist's mate first class, John Harlan Willis—USS *John Willis* (DE 1027) is named for him—was performing his corpsman duties with the Third Battalion, 27th Marines, Fifth Marine Division. Under heavy enemy artillery and mortar fire, Willis treated many Marines until he was himself wounded and ordered back to a first aid station for treatment.

Later, without waiting for an official medical release, Willis returned to his front-line platoon and continued his life-saving work. During a hand-to-hand enemy counterattack, Willis advanced to the extreme front lines under heavy mortar and sniper fire to aid a Marine lying wounded in a shell hole.

He administered blood plasma to the wounded man even as he was bombarded by enemy hand grenades. He returned the first one as he continued to administer the life-saving fluid. The enemy poured grenade after grenade at him. He kept throwing each back in quick succession until the ninth one exploded in his hand and killed him.

TOWARD THE END of World War II, in January 1945, CDR George Fleming Davis — USS *Davis* (DD 937) is named for him—won his Medal of Honor while commanding officer of USS *Walker* (DD 723).

PRESIDENTS Eisenhower and Truman present MOH to W. R. Charette, HM3, and G. E. Wahlen, PhM1c, USN.



NAMESAKE—*USS John Willis* (DE 1027) was named after Medal of Honor winner John Harlan Willis, PmM2c, right.

His ship was engaged in support of minesweeping operations to clear the waters for heavy surface and amphibious forces at Lingayen Gulf, Luzon, Philippine Islands. While operating without gun support from other surface ships, *Walker* was attacked simultaneously by four Japanese suicide planes.

CDR Davis took his position in the exposed wings of the bridge and directed the action from there. He ordered control to pick up the lead plane and open fire. The first plane plunged into the sea. The second one passed close over the bridge as it, too, nosed into the ocean.

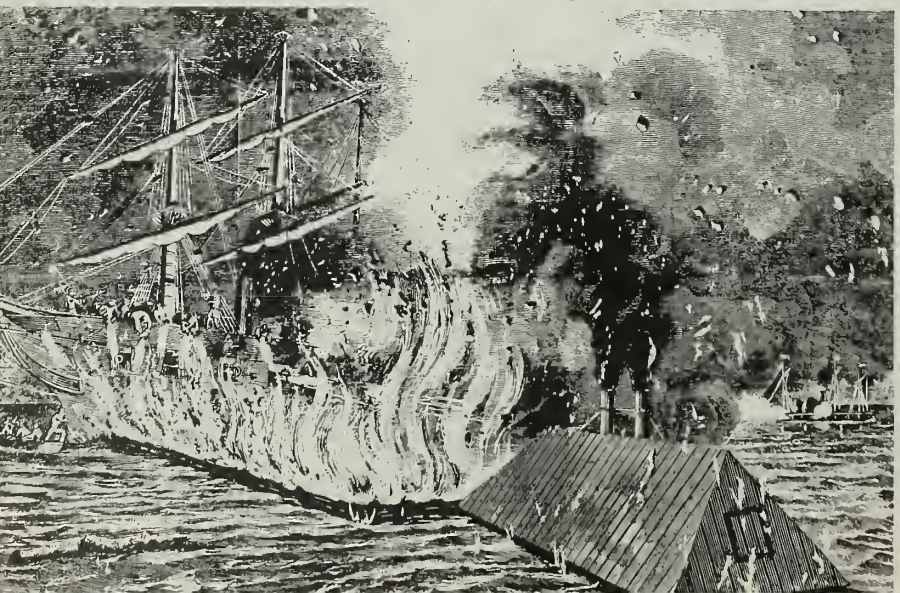
CDR Davis remained at his post as the third plane crashed the after end of the bridge. Seriously wounded, drenched in gasoline, and with the bridge enveloped in flame, CDR Davis remained on his feet to see the last plane destroyed.

Even then, he assured himself that the fires were under control and the ship was safe before he agreed to be carried below. Several hours later, he died.

ON 18 JUN 1945, Fred Faulkner Lester, Hospital Apprentice First Class, USN, while serving with the Marine Corps on Okinawa Shima, earned a Medal of Honor for this deed of heroism:

He was on the front lines as the Marines were attacking a Japanese hill position in the Ryukyu chain. Following an assault on this position, Lester saw a wounded Marine lying in an open field. Despite heavy gunfire that struck him once as he inched forward toward the Marine, he dragged the wounded man toward safety. As he was returning to his position, he was shot a second time. He was too badly wounded to administer first aid. He realized his own wounds were fatal, and refused medical aid for himself. Instead, he directed others in their treatment of not only that wounded man, but also many others before he died. USS *Lester* (DE 1022) is named for him.

THE BEGINNING—First Medals of Honor were presented for deeds performed during Civil War in action such as this during the battle of New Orleans.



HERE IS A LIST of all the U. S. Navy ships that are now in commission and currently under construction that are named for Medal of Honor winners:

USS *Howard W. Gilmore* (AS 16), named for CDR Howard W. Gilmore, USN; **USS *Daly*** (DD 519), named for Sergeant Major Daniel Daly, USMC; **USS *Miller*** (DD 535), named for Acting Master's Mate James Miller, USN; **USS *Stoddard*** (DD 566), named for Acting Master's Mate James Stoddard, USN; **USS *Bearss*** (DD 654), named for Brigadier General Hiram I. Bearss, USMC; **USS *Kidd*** (DD 661), named for Rear Admiral Isaac Campbell Kidd, USN.

USS *Hugh Purvis* (DD 709), named for Corporal Hugh Purvis, USMC; **USS *Laffey*** (DD 724), named for Acting Master's Mate Bartlett Laffey, USN; **USS *Buck*** (DD 761), named for Master's Mate James Buck USN; **USS *Gurke*** (DD 783), named for Private First Class Henry Gurke, USMC; **USS *Richard B. Anderson*** (DD 786), named for Private First Class Richard B. Anderson, USMC; **USS *Cassin Young*** (DD 793), named for Captain Cassin Young, USN.

USS *Rooks* (DD 804), named for Captain Albert Harold Rooks, USN; **USS *Robert H. McCard*** (DD 822), named for Gunnery Sergeant Robert Howard McCard, USMC; **USS *Ager-***

holm (DD 826), named for Private First Class Harold Christ Agerholm, USMCR; USS *Power* (DD 839), named for First Lieutenant John Vincent Power, USMCR; USS *Ozbourn* (DD 846), named for Private Joseph William Ozbourn, USMCR; USS *Witek* (DD 848), named for Private First Class Frank Peter Witek, USMCR.

USS *Richard Kraus* (DD 549), named for Private First Class Richard Edward Kraus, USMCR; USS *Leonard F. Mason* (DD 852), named for Private First Class Leonard Foster Mason, USMC; USS *Charles H. Roan* (DD 853), named for Private First Class Charles Howard Roan, USMC; USS *Davis* (DD 937), named for Commander George Fleming Davis, USN; USS *Jonas Ingram* (DD 938), named for Admiral Jonas Howard Ingram, USN; USS *Bigelow* (DD 942), named for Elmer Charles Bigelow, Watertender First Class, USN.

USS *Edson* (DD 946), named for Major General Merritt Austin Edson, USMC; USS *Fletcher* (DDE 445), named for Rear Admiral Frank Friday Fletcher, USN; USS *Epperson* (DDE 719), named for Private First Class Harold Glen Epperson, USMCR; USS *New* (DDE 818), named for Private First Class John Dury New, USMC; USS *Basilone* (DDE 824), named for Sergeant John Basilone, USMC.

USS *Robert A. Owens* (DDE 827), named for Sergeant Robert A. Owens, USMC; USS *Robert L. Wilson* (DDE 847), named for Private First Class Robert Lee Wilson, USMC; USS *Damato* (DDE 871), named for Corporal Peter Anthony Damato, USMC; USS *Kenneth D. Bailey* (DDR 713), named for Major Kenneth D. Bailey, USMC; USS *William R. Rush* (DDR 714), named for Captain William Rush, USN.

USS *Corry* (DDR 817), named for Lieutenant Commander William Merrill Corry, Jr., USN; USS *Hanson* (DDR 832), named for First Lieutenant Robert Murray Hanson, USMC; USS *Herbert J. Thomas* (DDR 833), named for Sergeant Herbert J. Thomas, USMCR; USS *Hawkins* (DDR 873), named for First Lieutenant William Dean Hawkins, USMCR; USS *Dyess* (DDR 880), named for Lieutenant Colonel Aquilla James Dyess, USMCR; USS *Bordelon* (DDR 881), named for Staff Sergeant William James Bordelon, USMC.

USS *O'Hare* (DDR 889), named

World War I Medal of Honor

for Lieutenant Edward Henry O'Hare, USN; USS *Huse* (DE 145), named for Vice Admiral Henry McClaren Pinchney Huse, USN; USS *Peterson* (DE 152), named for Chief Watertender Oscar Vernon Peterson, USN; USS *Douglas A. Munro* (DE 442), named for Douglas A. Munro, Signalman First Class, USCG; USS *Parle* (DE 708), named for Ensign John Joseph Parle, USNR; USS *Dealey* (DE 1006), named for Commander Samuel David Dealey, USN; USS *Courtney* (DE 1021), named for Major Henry Alexius Courtney, Jr., USMCR; USS *Lester* (DE 1022), named for Fred Faulkner Lester, Hospital Corpsman First Class, USN.

USS *Evans* (DE 1026), named for Commander Ernest Edwin Evans, USN; USS *John Willis* (DE 1027), named for John Harlan Willis, Pharmacist's Mate First Class USN; USS *Van Voorhis* (DE 1028), named for Lieutenant Commander Bruce Avery Van Voorhis, USN; USS *Claud Jones* (DE 1033), named for Commander Claud Ashton Jones, USN; USS *Wilkinson* (DL 5), named for Vice Admiral Theodore S. Wilkinson USN; USS *Bausell* (DD 845), named for Corporal Lewis Kenneth Bausell, USMCR; and USS *Bauer* (DE 1025), named in honor of Lieutenant Colonel Harold William Bauer, USMC; USS *Keppler* (DDE 765) named for Reinhardt J. Keppler, BM2c, USN; USS *Cromwell* (DE 1014) named for CAPT John P. Cromwell, USN; USS *Hammerberg* (DE 1015) named for Owen F. P. Hammerberg, BM2c, USN, *Charles Berry* (DE 1035) named for CPL Charles J. Berry, USMC; *John King* (DDG 3) named for John King, WT, USN.

THE NAVY MEDAL OF HONOR—the U. S. Army also has a Medal of Honor—is often referred to as the Congressional Medal of Honor. It has been awarded to 966 Navy and Marine Corps men and to one member of the Coast Guard. Of these, 138 medals were conferred during WW II (77 posthumously); during

LAST ACTION in which Navymen earned the Medal of Honor was during the Korean conflict. A total of 49 top decorations were given Navymen, Marines.

CARRYING ON—*USS Hammerberg* (DE 1015) carries name of heroic Navy diver Owen F. P. Hammerberg, BM2, USN.

the Korean conflict, 49 men received the high award (33 posthumously).

The most recent Navy Medal of Honor went to LTJG John Kelvin Koelsch, USN, for his attempt to rescue a Marine aviator who had been shot down in North Korea on 3 Jul 1951.

The Medal of Honor was first authorized on 21 Dec 1861 for enlisted men only, as an act, to promote further "the efficiency of the Navy." The star-shaped medal of bronze shows the figure of Minerva (the Union), encircled by the stars of the 34 states of 1861. Minerva holds in her left hand the fasces (badge of authority). The shield in her right hand is driving off the serpents held by the crouching figure of Discord.

Although the World War I Medal was changed in appearance, the present design and that of the Civil War period are identical. Only the clasps are different. Today there are many medals, appropriate for all types of service as well as for heroism. Until 1919, when the Distinguished Service Medal and Navy Cross were authorized, the Navy had only the Medal of Honor to award. In 1926 the Distinguished Flying Cross was authorized, all these new medals to be retroactive to 6 Apr 1917.

OFFICERS WERE FIRST AWARDED the Medal of Honor for action on 21 and 22 Apr 1914 during the Mexican Campaign. Forty-six Navymen and nine Marines received the Medal of Honor for heroism during these two days. During WW II, 57 Navymen, 80 Marines and one member of the Coast Guard were given the Navy's highest award. In contrast, 310 Navy enlisted men and 17 enlisted Marines received the Medal for Civil War service.

In the early days, the Medal of Honor was earned for various deeds of valor. Since it was the only decoration for bravery, some of the acts might not have qualified for a Medal of Honor today.

Here are some of the first citations:

• Edward Ringold, Coxswain, USN—"Served as coxswain on board the U.S.S. *Wabash* in the engagement at Pocataligo, 22 Oct 1862. Soliciting permission to accompany the howitzer corps, and performing his duty with such gallantry and presence of mind as to attract the attention of all around him, Ringold, knowing there was a scarcity of ammunition, went through the whole line of fire with his shirt slung over his shoulder filled with fixed ammunition which he had brought from two miles to the rear of the lines."

• William A. Stanley, Shell Man, USN—"Shell man on No. 8 on board the U.S.S. *Hartford* during successful actions against Fort Morgan, rebel gunboats and the ram *Tennessee* in Mobile Bay, on 5 Aug 1864. Although severely wounded when his ship sustained numerous hits under the enemy's terrific shellfire, Stanley continued to pass shell until forced by loss of blood to go below."

• William Talbott, Captain of Forecastle, USN—"Served as captain of the forecastle on board the U.S.S. *Louisville* at the capture of the Arkansas post, 10 and 11 Jan 1863. Carrying out his duties as captain of a 9-inch gun, Talbott was conspicuous for ability and bravery throughout this engagement with the enemy."

• Matthew Arthur, Signal Quartermaster, USN—"Served on board USS *Carondelet* at the reduction of Forts Henry and Donelson, 6 and 14 Feb 1862. Carrying out his duties as signal quartermaster and captain of the rifled bow gun, Arthur was conspicuous for valor and devotion, serving most faithfully, effectively and valiantly."

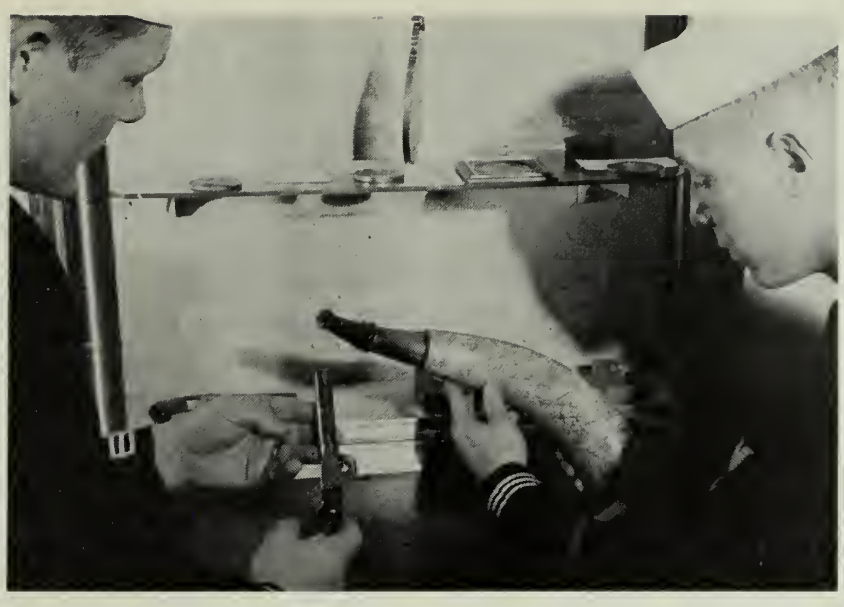
In nearly 100 years of existence, however, only nine men have earned the Navy Medal of Honor twice. No man has won two since 1915.

A Medal of Honor may be awarded for either combat or non-combat. The Medal is available to "Any person who, while in the naval service of the United States, shall, in action involvng actual combat with the enemy, or in the line of his profession, distinguish himself conspicuously by gallantry and intrepidity at the risk of his life above and beyond the call of duty and without detriment to the mission."

That's all there is to it, that is, except that he must be recommended within three years from the date of the distinguished act or service, and be awarded the Medal within five years of such act or service.

Heroism is not out of date—it never will be.

—Erwin A. Sharp, JO1, USN.



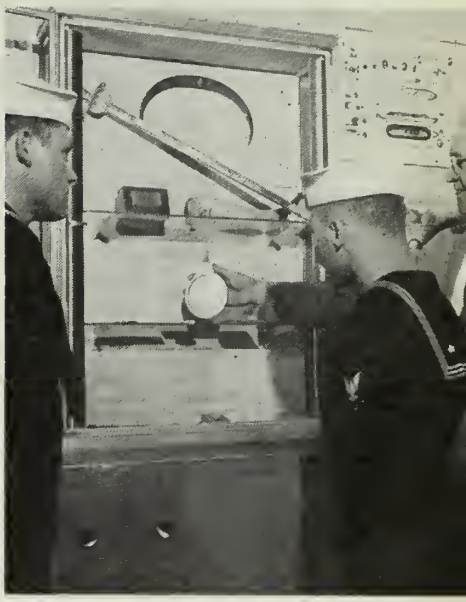
Sailor's Museum

A SPOT OF INTEREST to Navymen on leave or liberty in the area of our nation's capital is the Truxtun-Decatur Museum. Here are displayed relics of naval history that make famous ships of the past seem to come alive again.

In May of 1950 the museum was opened to display historical exhibitions devoted to seapower in all its components (Navy, Marine Corps, Coast Guard and Merchant Marine). This interesting collection of items from yesterday's Navy, gathered by the Naval Historical Foundation, is located at 1610 H Street, N.W. in downtown Washington just a short cruise from the White House. The museum is next door to the historic Decatur House, now open as a national naval shrine.

So the next time you find yourself on leave in the nation's capital set your course toward the naval displays at Truxtun-Decatur Museum.

Top: Hand-carved powder horn used in siege of Quebec in 1767 is examined by S. D. Hutnik, Jr., YN2, USN, while L. A. Thorstenson, YN1, USN, looks at percussion pistol of 1830—1850 period. *Top Right:* Models of U. S. frigate *Raleigh* and schooner *Flying Fish* attract attention. *Right:* John McGuire, LT, USN, retired, shows Navymen a Persian astrolabe (forerunner of sextant) such as Columbus used. *Lower Right:* Museum visitor aims pistol of Commander Isaac Hull. *Lower Center:* This is not a beer mug but a copper lantern from USS *Constitution*. *Lower Left:* Cut-away working model of deck battery of French ship of the line is checked out.



THEY COME to honor *Arizona* crew.

CINCPACFLT boat carries passengers to *Arizona* memorial (top). *Above:* Navy crews handle craft in boat house on Aiea side of Pearl Harbor.

18 Years Later —

Visitors Pay

WHEN A PERMANENT memorial is erected over the sunken battleship USS *Arizona* (BB 14) at Pearl Harbor, no one will be prouder to see it than the 15 Navymen who staff the boathouse of the U. S. Paeifie Fleet Commander, Admiral Herbert G. Hopwood, USN.

This is so beeause their daily lives are elosely assoeiated with the ship whieh was sunk by the Japanese on 7 Dee 1941. Almost every day of the year these men conduet guided tours of historie Pearl Harbor and USS *Arizona* for military and eivilian offieials. Last year they provided harbor tours for more than 12,000 visitors to the naval base.

In addition to VIPs from the United States their passenger lists have ineluded foreign dignitaries and movie stars and on many oeeasions friends and relatives of the 1102 Navymen who are still entombed in the ship's rusting hulk.

In eharge of the boathouse is Chief Boatswain's Mate Wyatt C. Coley, a veteran of 15 years' naval serviee. He has given the unit and its men the shipshape appearanee that has earned them the reputation of being one of the sharpest organizations in the Paeifie Fleet.

Chief Coley has four boats under

INDIA'S Vice President leaves memorial. *Right:* The Battleship *Arizona* of earlier years is pictured here at sea.

Tribute to Crew of USS Arizona

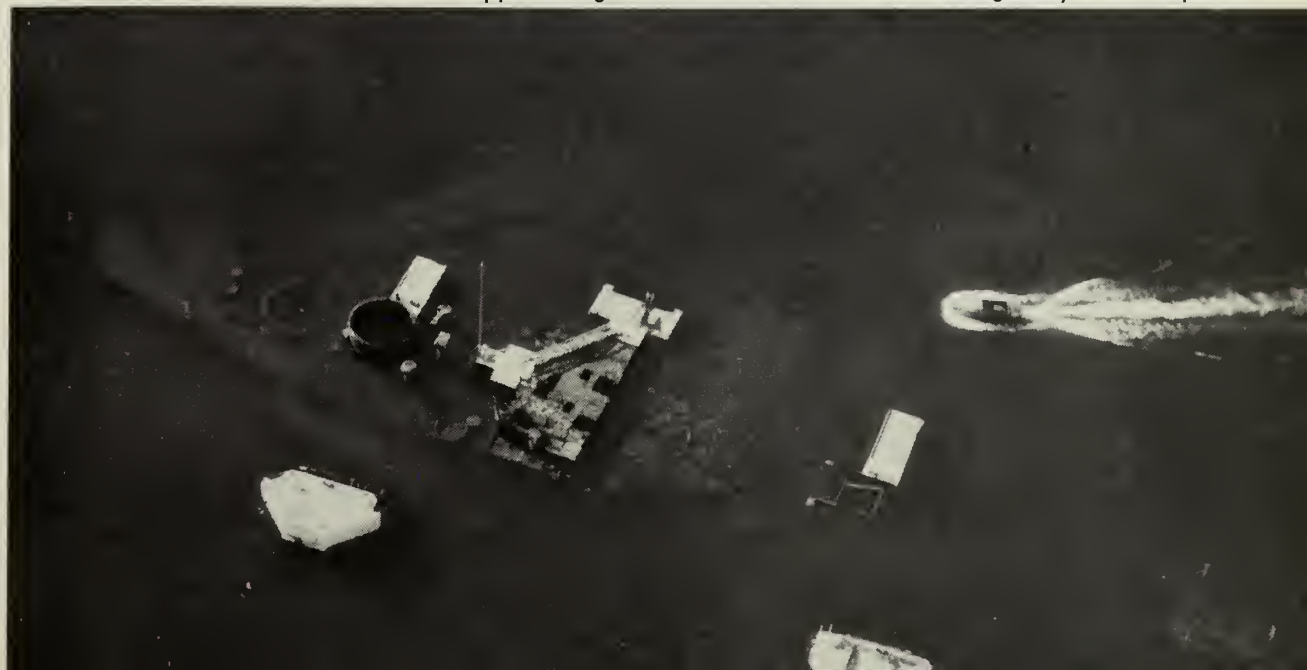
his command and a crew of 14 men who operate and maintain them for both harbor tours and duty runs. In addition to being experts in small boat handling these sharp sailors must know harbor navigation and be well acquainted with the history of Pearl Harbor for they are often called on to give lectures while at the same time acting as either coxswains or bowhooks.

In 1949 the Pacific War Memorial Commission was created by the Hawaiian legislature in an effort to bind together several historic sites in that area into a Pacific Memorial. The battleship *Arizona* was chosen to represent the Pearl Harbor terminus of this system.

Plans for providing a permanent memorial structure for *Arizona* and her crew went ahead when Public Law 85-344 was signed by the President in 1958.

This law authorizes the Secretary of the Navy to accept contributions (they should be addressed directly to USS *Arizona* Memorial, Pearl Harbor, Hawaii). The law also authorized the Navy to undertake construction of the memorial and to be responsible for the maintenance of the memorial when it is completed.

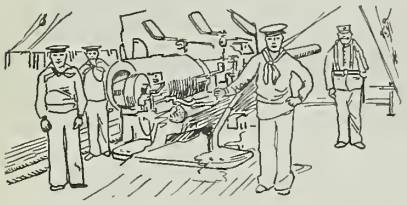
FROM ON HIGH—Photo shows tour boat approaching sunken hulk of *USS Arizona* bridged by wooden platform.



Those Were the Days

We're not quite sure about the majority of our readers, but history holds a special fascination for the members of all ALL HANDS *staff. And we're pushovers for the informal, personal, I-was-there variety. Aware of our predilection in this respect, CDR N. R. Fuller,* USN, *thought of us when, while in Panama not too long ago, the following statement came into his possession.*

CDR Fuller tells us that the writer, Bror Hagbord Holmgren, served in the U.S. Navy from 1898 to 1909



using the more easily pronounceable name of John Harris. The uncle of the wife of a U.S. State Department official, Harris (or Holmgren) lives in Santiago, Chile.

Now over 80, Harris receives a pension as a U.S. Spanish-American War veteran. It is evident that the Navy meant a lot to him.

ON 28 MARCH 1898, I enlisted in the United States Navy as ordinary seaman under the name of John Harris, giving as my birthplace, Helsingborg, Sweden. My place of enlistment was Galveston, Texas, where a recruiting party was temporarily stationed.

I was sent to USS *Franklin* at Norfolk, Va., and from there to the scout cruiser USS *Minneapolis* at Hampton Roads. (*Minneapolis* was considered one of the fastest ships afloat at that time. I'm sure she had the hottest firerooms and burned the most coal.) Shortly after the declaration of war (Spanish-American), we were sent to cruise along the Northeast coast of U.S.A. going as far as Eastport, Maine. Going South, we were informed of Dewey's victory at Manila by visual signals. We had no wireless then.

After spending some time at Hampton Roads with the rest of the Navy under the command of Commodores William T. Sampson and Winfield S. Schley, we went South alone. We cruised about Cuba and Puerto Rico, and then coaled at St. Thomas. The following morning, we captured the Spanish ship *Maria Dolores* of Balboa just outside San Juan. She was coal-laden from Rio. We put aboard a prize crew and sent her to Charleston, S. C.

SOME DAYS LATER we met the rest of the Fleet outside of Santiago, Cuba, where the Spanish fleet was suspected to be. But our boilers were in such bad shape that we were sent to Newport News where we spent the rest of the war.

After peace was declared, we were sent to Philadelphia, where I was transferred to the auxiliary cruiser USS *Yosemite*.

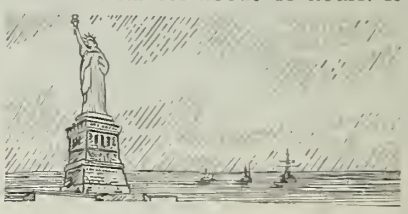
We towed some John Ericson monitors from around New York to Philadelphia. We also took the modern monitor USS *Amphitrite* from Mole St. Nicholas.

In November, I was transferred to

the battleship USS *Massachusetts* at the Brooklyn Navy Yard. On our way out of port, we scraped the bottom near the Statue of Liberty and had to go into drydock, where we stayed until April 1899. Later we joined the Fleet at Newport and went on to Boston where on June 17th, we marched around Bunker Hill—and not for the last time.

Our ship took part in the welcome to USS *Olympia*, and Dewey in USS *New York* and later went to sea in the company of *New York* to test the Marconi wireless. The inventor was on *New York* and his assistant aboard *Massachusetts*. They successfully sent messages 45 miles, which was pretty good for the time.

After the usual cruise and Navy Yard time, we went to Pensacola in March 1901. Going to sea on one of the hotter days, we went aground on a sandbar for about 48 hours. If



we had stayed 12 hours longer, my time would have expired. As it was, I had to go along to Puerto Rico and other points. We arrived at Tompkinsville (Staten Island, N. Y.) April 24th and I was discharged, honorably.

I REENLISTED aboard USS *Vermont* at Brooklyn Navy Yard, on 29 July 1901, and a few days later was sent to USS *Franklin* at Norfolk as part of the crew being assembled for the new battleship USS *Illinois*, then being completed at Newport News.

From *Franklin*, I was sent as part of a company to Washington, D.C., to take part in the funeral of President McKinley; where I stood guard in the rotunda of the Capitol as he lay in state. I then joined *Illinois* at Newport News.

Our first mission was the following February, when we hoisted the flag of Admiral R. Evans at Tompkinsville to greet Prince Henry of Prussia. He came in the Imperial Yacht to see Alice Roosevelt break a bottle of champagne on a yacht the Kaiser had built in the United States.

We then went to the Navy Yard to be fitted out as flagship of the European Squadron. When the ship was ready, we broke the flag of Admiral Crowninshield and sailed for Europe. Our first port was Naples and a few days later a small port on the other side of Vesuvius, called Castella di Mar.

Early in June our ship left for England where we assembled at Spithead with all the English Navy and one ship from all other nations' navies. We were to be reviewed by Edward VII after his coronation. This did not take place, however, as the King got sick and could not be crowned.

We went on to Gravesend (England) where we joined the rest of our Squadron which consisted of the cruisers USS *Albany, San Francisco,* and *Chicago.* Early in July, the Squadron left for a cruise that was to include visits to Oslo, Copenhagen, Stockholm and Helsingfors.

AS WE WERE entering Oslo's inner harbor, the steering gear failed, and we headed straight for the shore. By going full back and letting go three anchors, (the chains of two broke), we managed to stop before reaching the King's villa. We had some leaks forward and the plates buckled two-thirds of the length. We recovered the anchors, made repairs, and a couple of days later we were visited by Oscar II, who thoroughly inspected ship and crew.

Under our own steam, we went from there to Chatham Dockyard in England, where we were several weeks being repaired.

Next port was Villa Franche in the South of France, from where we sailed to join the Atlantic Squadron.

The following spring we were rammed by USS *Missouri* outside Guantanamo Bay. Our port propeller was damaged, struts were bent and a small hole was punched in the after part of the ship. We limped to Brooklyn, N.Y., and were there several weeks.

WHEN FIT FOR SEA, we went South for our first modern target practice and did very well. The ship as a whole made one of the best scores. I qualified as Intermediate Gunpointer First Class, which I did at all practices in which I took part. After target practice, we joined the rest of the Fleet at Trieste. We returned to the U.S. and made the usual cruise to West India waters.

In July 1905 we waited with other ships off the Virginia Capes to meet the ship which was carrying the remains of John Paul Jones. We escorted it to Annapolis.

While aboard *Illinois*, I served as Coxswain of the gig to Captains George Albert Converse, Royal Bira Bradford and John H. Rodgers. I was discharged on 28 July 1905. On 8 November, I reenlisted in New York.

I went to the Training Station at Newport, R.I., and went aboard the old Frigate USS *Constellation* where I remained until 31 December. I then went to the Seaman Gunner Class at Washington, D.C., and then to the Torpedo Station at Newport.

In October 1906, I graduated as Seaman Gunner and qualified diver. On the 23rd of that month I joined the new cruiser USS *Washington.* Our shakedown cruise was made as escort to our sister ship USS *Tennessee,* aboard which President Theodore Roosevelt (a very fine man) made a trip to Colon.

We then returned to the Navy Yard, where we stayed until May '07. France was next, where we visited La Rochelle and Brest. Our ship returned to the Brooklyn Navy Yard to get ready for our cruise in the Pacific.

WE HEADED SOUTH from New York about 1907, and visited Port of Spain, Rio, and Montevideo. We coaled at Punta Arenas, Callao, Acapulco; had target practice at Magdalena Bay, Lower California; visited some California ports and then went to Seattle, Wash. As we were the first ship named after that state to visit, we were given a great welcome.

Later, together with the rest of the cruiser Fleet, we went to Samoa via Honolulu. From Honolulu we went via Panama and Callao to Talcahuano, Chile. Until this time, the U.S. Navy's major ships had white hulls and yellow upper works. Here, the ships were painted the dark grey which still is the fashion.

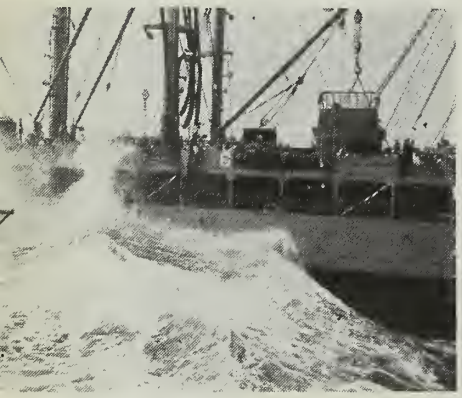
After Talcahuano, we spent some days at Coquimbo; spent some weeks keeping peace between Honduras and some neighbor; and then visited San Francisco and Seattle. We put in at the yard where the ship was readied for a cruise East.

I was discharged on 7 November 1909 as Boatswain's Mate second class—not very brilliant after 11 years. The fault was perhaps, I had opinions of my own which I expressed and defended. My marks on my last discharge were five fives and one four—Five equals 100 per cent.

That was my life in the Navy back in the years around the turn of the century.

—John Harris

ROLL ON—Cases are stowed away.



MARKET DAY—Supplies are swung to hangar deck of *USS Forrestal* (CVA 59).

Supermarkets at Sea

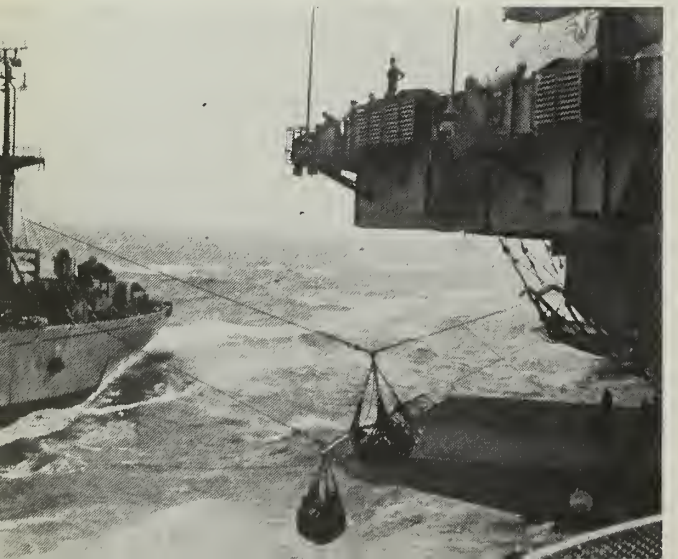
PERHAPS the only true all hands operation aboard USS *Forrestal* (CVA 59), besides battle stations, is an all-day replenishment at sea. When the carrier striking force of the Sixth Fleet meets the Service Force, Task Force 63, then begins a rigorous day that often runs well into the night.

Forrestal may go alongside as many as five ships in the course of a rendezvous with Task Force 63 to take on fuel, dry stores, frozen goods general stores material and ammunition. Each one of these meetings requires a smooth, close approach regardless of sea conditions, quick securing of lines between ships, and efficient passage of hundreds of tons of goods to the correct space in the correct order.

All in all it takes about 600 men in the working party, not counting the crew on routine work.

The amount of supplies taken aboard a ship always depends on the supply ship itself. For instance, one of the best records achieved by *Forrestal's* crew was during replenishment from USS *Rigel* (AF 58). A total of 340 tons of food, or approximately 15,000 cases, was transferred at sea in three and one-half hours. In three more hours every case was stowed away. The entire operation was conducted on a ready hangar deck with planes throughout ready for immediate use.

ALL HANDS JOB—Transferring supplies by high line underway at sea takes team work from bridge to hold.



LETTERS TO THE EDITOR

Instructor Duty Requests

SIR: On 9 Mar 1959 I submitted a request for instructor duty on NavPers Form 1339. Since then I have heard three different theories on the matter, and I would very much appreciate it if you would straighten me out.

One theory is that this type of request is obsolete and will not even be accepted by the Bureau. Another is that I will have to wait until I am on the Seavey list before I can request instructor duty. A third is that the request will be accepted, but not acted upon until I am on the Seavey list.—E. F. L., RM1, USN.

• *Although submitting your request on NavPers Form 1339 was not the proper procedure, it was not all wasted effort. Your request will be held in the Bureau and the information used when your name comes up on Seavey.*

But, just in case some of your friends want instructor duty, pass the word that NavPers Form 1339 is neither desired nor required by the Bureau.

Procedure for requesting instructor duty at time of submission of Seavey data cards and procedure for change of duty preference to instructor duty subsequent to submission of Seavey data cards are set forth in paragraphs 3 and 5, Enlisted Transfer Manual *(NavPers 15909).*

No NavPers 1339s, please.—ED.

Grade Seven Question Mark

SIR: Since the splitting up of the Teleman rating, there has been some confusion over the proper rating abbreviations.

I have been designated Teleman Radioman with a job code of RM 2300. My question is: Am I a TE/RMCA, a TE(RM)CA, a TERCA, or just what?

Although my letter of appointment to E7a used TE/RMCA, local usage is varied. What is really supposed to be correct?—K. D. W., (?), USN.

• *The correct title for your "conversion" rating is either Teleman/Radioman (TE/RM) or, in the other direction, Teleman/Yeoman (TE/YN).*

In your case, that would make the proper abbreviation TE/RMCA, which is the way they had it in your letter of appointment.

The controlling factor is the rating to which a TE will convert—either Radioman or Yeoman.—ED.

This section is open to unofficial communications from within the naval service on matters of general interest. However, it is not intended to conflict in any way with Navy Regulations regarding the forwarding of official mail through channels, nor is it to substitute for the policy of obtaining information from local commands in all possible instances. Do not send postage or return envelopes. Sign full name and address. Address letter to Editor, ALL HANDS, Room 1809, Bureau of Naval Personnel, Navy Dept., Washington 25, D. C.

Drawing ComRats

SIR: When I was ordered overseas for a normal tour of overseas shore duty, I was assigned to a commissioned drydock. It is not self-propelled and has been tied up here for years.

Although there is a mess aboard, chiefs eat about 85 per cent of their meals ashore. The *BuPers Manual* says that the commanding officer cannot grant ComRats to personnel stationed aboard a commissioned ship afloat.

There are three other operating drydocks at the base here, but they are non-commissioned. The men aboard eat at the base mess hall or draw ComRats.

Are there any provisions that will allow us to draw ComRats from aboard this ARD?—C. P. R., SFC, USN.

• *Since you are assigned to a commissioned ship of the Navy that operates a general mess aboard, you cannot be authorized commuted rations.*

Just as you said, "BuPers Manual," Article A-4404(6), prohibits commanding officers afloat from approving ComRats for enlisted men under their command.

If, however, the afloat command does not operate a general mess and enlisted men must eat in a mess hall ashore—as you say men aboard those other three ARDs do—the ashore commanding officer may approve ComRats.

That's why they can draw ComRats, and you can't.—ED.

Dependent Travel via MSTS

SIR: I have been told that dependents who are naturalized citizens can visit their homeland via MSTS on a space available basis. Fact or fiction? —W. A. J. M., ET1, USN.

• *Strictly scuttlebutt. Unaccompanied dependents of military personnel on duty within the continental U. S. are not authorized space available travel via MSTS or for that matter on MATS either. Now, if you were to accompany your dependents, that would be a different matter.*

OpNav Inst. 4650.4 spells this out in detail. Furthermore, there are no restrictions or special provisions because of a dependent's nationality.—ED.

Trainee Designator

SIR: I am a graduate from Class "A" Radioman's School under the Navy's conversion program. I have been in the process of changing from EN1 to RM1 since October 1958. Is it too late to change my mind? Is it possible for me to remain an Engineman? I have not taken part in any Fleet-wide examination for advancement to RM1.—J. L. C., EN1, USN.

• *As you undoubtedly realize, the Navy has invested a considerable amount of training effort to prepare you for a change in rating to Radioman. This, you will remember, is a result of your request.*

Under normal circumstances then, you are expected to fulfill your part of the bargain and continue in the new rating. This doesn't seem an unreasonable assumption.

If your commanding officer considers you incapable of learning the skills of the new rating, however, he may request, at any time, that the "in-service" trainee code be removed. Such recommendations are normally approved.

If you submit your own request for removal of the trainee designator, your letter will be reviewed in the light of your qualifications as reflected by the commanding officer's endorsement, and the training investment which has gone into the rating change thus far.—ED.

MMs in Subs

SIR: I was advanced in rating to machinist's mate third class last June. I have a sincere desire to serve in submarines. However, I have examined NavAct 2/1959 (Submarine Nuclear Power Training and Fleet Ballistic Missile Submarine Programs) and BuPers Inst. 1540.2C C-1 (Assignment of enlisted personnel to initial submarine training) and note that under both of these I am ineligible because of my MM rating.

Am I out of luck, or is there any other pertinent directive which might enable me to apply for submarine training?—M.J.B., MM3, USN.

• *No, you're not out of luck at all. Although the allowance for machinist's mates is small, MMs are now being accepted for basic enlisted submarine school because of increased requirements.*

We suggest that you submit a NavPers 1339 requesting such training to the Chief of Naval Personnel via your commanding officer. Good luck, we hope you make it.—ED.

SALTY START—Ship's bell of *USS Keppler* (DDE 765) became baptismal font for son of BT2 and Mrs. R. B. Hollinger (center) during shipboard ceremony.

Black Shoes for Khaki Uniform?

SIR: In my opinion, the black shoe looks much better with the khaki uniform than the brown one. I wonder if others share that opinion? Has this matter ever been brought before the uniform board, and if so, what was the result?—P. H. F., YNC, USN.

• *This question has been before the uniform board, and apparently not enough of your shipmates feel the way you do. This is especially true of the aviation branches, which are particularly anxious to retain brown shoes to wear with the winter working uniform.*

Also, while it might be said that since there are other black articles worn with service dress khaki and aviation greens it would not be inappropriate to wear black shoes instead of brown, this would not be the case with the tropical khaki uniform.—ED.

Training Courses and Schools

SIR: When I was reading Enclosure One to BuPers Inst. 1430.7C, concerning assignment to Navy Schools, I discovered something which I think needs clarifying.

Paragraph 3 b(4) says, "Satisfactory completion of a class 'A' school is considered as meeting the requirements for completion of a training course for the applicable pay grade E-4 rate. However, the Navy training course must be completed for advancement to pay grade E-5."

Must a class "A" school graduate, who has already been advanced to pay grade E-4, complete the Navy training course for third class as well as that for pay grade E-5, before he is eligible to complete for second class petty officer? C. H. J., YN3, USN.

• *No. Since you are a graduate of class "A" school, it is not necessary for you to complete the training course for both E-4 and E-5 to be eligible to compete for advancement to E-5.*

That paragraph means you are exempt from taking the training course for E-4 if you are a graduate from class "A" school. When you are ready for E-5, you must complete the training course for E-5 to be eligible.

Since you are already PO3, you are through with the training courses for E-4. In this case, "The training course" does not refer to the previous sentence in the instruction, but stands alone to mean "The training course for the applicable E-5 rating."—ED.

Railway Sailors

SIR: The article concerning the Naval Railway Batteries which appeared in the July 1959 issue of ALL HANDS was of particular note to some of your readers in Grand Rapids, Mich., because several local men were attached to that activity when it operated in France during World War I.

One item of interest concerning this activity is that it operated with the French army during the war. American sailors, wearing Marine uniforms, were attached to the French army—a really unusual situation.

A framed photograph of one of the railway guns now hangs in the wardroom of the Grand Rapids Naval and Marine Corps Training Center, a gift from the battalion commander whose father served with the railway group in WW I.

The Furniture City Post of the American Legion is a Grand Rapids Legion post whose membership is limited to veterans of the Navy, Marine Corps and Coast Guard. The post uniform is singularly different from the regular American Legion uniform. The hat, for example, looks much like a French beret, and has a large red pom-pom attached in the center on top. This French influence stems from the fact that several founders of the post had served in France with the Railway Batteries.

Let me express my thanks to you for an extremely interesting article.—A. R. V., LCDR, USNR.

• *It frequently happens that an article published in* ALL HANDS *reminds one or more of our readers of related information unknown to us. This is one of those cases.*

Our thanks to you for passing along these added items on what we, too, thought was a very interesting and unusual story.—ED.

Recruiting Duty for Top Grades

SIR: According to the article in your August issue about the Warrant Officer program being phased out, men advanced to E-9 will be obligated for three years. The article also said that E-9s would take over about one-third of the present WO billets.

This disturbs me. What about an E-9 who wants recruiting duty, is he ineligible under the new policy? And another thing, will E-9s come ashore under Seavey the same as other chiefs, or will they be forced to stay at sea in some WO's billet?

I hesitate to take the examination for E-9 if I am ineligible for recruiting duty, or if I will have to stay at sea for an extended period.—G. W. M., SMCS, USN.

• *Have no fear chief. You will be rotated to shore duty under Seavey and you are eligible for recruiting duty.*

If you request and are assigned to recruiting duty as an E-8 or an E-9, your application will be handled in the same manner as that of an E-6 or E-7.

Since you are a signalman, you would first be sent to the recruiting school in either San Diego, Calif., or Bainbridge, Md. From school, you'll go to a Navy Recruiting Main Station and be further assigned by the officer-in-charge as a canvasser-type recruiter. (This is the kind that beats the bushes for new recruits.) E-8s and E-9s on this type recruiting duty will fill the same billets to which an E-6 or E-7 would be assigned.—ED.

Correcting Service Records

SIR: At one time corrections in enlisted service records were made in red ink and initialed by the personnel officer. Was this official, and if so, what authorized it?

Is it also authorized by the current *BuPers Manual*?—J. J. W., PN1, USN.

• *Yes. The red ink corrections were official. "BuPers Manual," (1942, Art. D-4001) authorized them. The authority to initial the corrections could be delegated to the personnel officer, or the changes could be initialed by the CO or exec.*

Under the current system, which is covered by "BuPers Manual" (1948, Art. B-2307), the corrections are to be made in black or blue-black ink and initialed by the CO or an officer designated by him.—ED.

Anyhow, Penguins Hold the Record

SIR: In reference to the letter and editorial comment in the August 1959 issue of ALL HANDS relative to "firsts" in Antarctic skin diving, I enclose a photograph taken in 1947 during Operation Highjump in the Antarctic. The divers pictured were a UDT team attached to the central group of Task Force 68. They were, as I recall, under the direction of a LT Iverson, USN.

A repeat performance was staged the next year by a UDT team attached to Task Force 39, and headed by a LTJG Statler.

The photograph is taken from the cruise book of Operation Highjump. It may or may not represent a first.—C. W. M., LCDR, CEC, USN.

• *Once burned, twice shy, as the saying goes. We've made a firm resolution—we're not going to make any more claims concerning firsts, lasts, onlys or what have you from now on without documentary proof staring us in the eye.*

Even then we'll watch our step—especially in regard to Antarctic skin diving. After all, the Navy was conducting explorations in that area as far back as the 1830s.—ED.

WHO WAS FIRST? Antarctic skin divers pose for picture in ice-filled waters during UDT exercises held as part of Operation Highjump in 1947.

It's Matter of Degrees

SIR: In your August issue there was one statement concerning Kodiak which was misleading, to say the least.

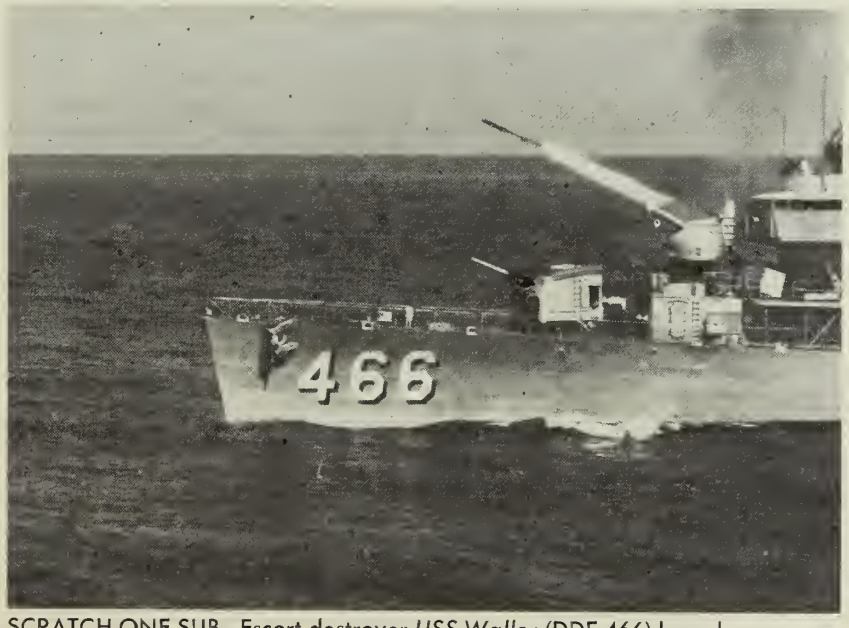
The claim was made that "The climate in Kodiak is comparable to that of the Puget Sound area . . ." Statistics given were that temperatures range from 7 below in winter to a summer-high of 80 degrees, with an average winter temperature of 34 degrees and average summer, 50 degrees. Rainfall was stated as 60 inches annually.

Now consider the same statistics at Seattle, the largest city on Puget Sound. Temperatures range from a low in winter of 25 degrees above to a summer high in the mid-nineties. The average mid-winter temperature is 42.2 degrees; thermometer reading in summer averages 64.2 degrees. And 31.9 inches of rain is the yearly average.

You may compare the Kodiak climate with that in the Pacific Northwest, but not favorably.—F. R., IRO, MSTS.

• *We could answer you more effectively if we could figure out whose side you are on—Seattle's or Kodiak's. It's all so relative. After surviving a Washington summer, most* ALL HANDS *staff members are inclined to be a little less than enthusiastic about any place that boasts "a summer high in the mid-90s." At the moment, a summer high of 80 degrees looks good to us although we may, of course, change our viewpoint again come next January and February.*

However, we would like to clarify the record on one point: information concerning the living conditions of various areas, as reported in ALL HANDS *is, as a rule, provided by personnel on the scene and forwarded, via the commanding officer, to the Chief of Naval Personnel. The information is then passed on to us. As we mentioned in our introduction, we haven't been to Kodiak—but we can testify that Seattle has some very fine weather, indeed.*—ED.



SCRATCH ONE SUB—Escort destroyer *USS Waller* (DDE 466) launches weapon *Alfa*, a long-range antisubmarine rocket, during ASW exercise in Atlantic.

Wrong Story

SIR: The Servicescope section of the August 1959 issue of ALL HANDS contained an article entitled "A Three-stage Launching Vehicle." In describing the *Vega* it stated that "fully loaded it will weigh about 295,000 pounds and will stand as high as a 1-story building."

The breadth of a vehicle weighing that much with a height of only one story would be tremendous. I think that however high 1-story buildings may be in various parts of the world, the height of the fully loaded *Vega* would be infinitely higher—by a factor of 10, possibly.—W. J. B., YN1, USN.

• *You're right, of course—the original copy read "as high as a 10-story building," but somehow a typo in the final version got past everyone.*—ED.

CYCLING GREECE—Sunny country side of Greece is explored with the aid of bicycles by whitehats as their ship makes a stopover at Rhodes.

Uniforms and Brassards

SIR: Articles 1204 and 0113 (3) (d) of *Uniform Regulations, 1951,* leave me confused concerning the wearing of brassards.

On which arm are duty officers—such as Officers of the Deck and Squadron Duty Officers—expected to wear their duty-indicating brassards? Are only shore patrol and beach guard officers supposed to wear the brassard on the right arm?

Are enlisted men serving as Junior Officers of the Watch to be considered "out of uniform" if they wear brassards on the left arm?

Should a watchstander be corrected when he wears a duty or pistol belt so that the letters "U. S." on it appear upside down?

Is a zipper-type working jacket an authorized item of uniform apparel?

In the absence of any specific instructions from his command, which cap cover should a CPO wear while in dungaree working clothes?

Finally, are ownership markings required on the clothing of CPOs?—J. L. M., AECM, USN.

• *The 1951* Uniform Regs *were admittedly confusing on the wearing of brassards. However, we think the problem has been cleared up in the new* U. S. Navy Uniform Regulations, 1959. *The new regulations say that:*

All brassards are to be worn on the right arm.

The Officer of the Day and Junior Officer of the Day on duty at a shore station should wear an "OOD" or "JOOD" brassard, as the case may be.

Officers and enlisted men on shore patrol or beach guard duty are required to wear an "SP" brassard.

As for your question on the pistol belt, if it's marked it should be worn so that the letters are rightside up. The people who wear it are those on duty as mail clerks, orderlies, guard mail petty officers, officer-of-the-deck's messengers and such.

Yes—zipper type, blue working jackets are authorized. They must be single-breasted, made of water-resistant cotton cloth and lined with nylon fleece. They replace the old, unlined, blue denim dungaree jacket with five metal buttons.

On to the cap covers. A chief in dungaree working uniform may wear either a blue, white or khaki one. The color should conform with that prescribed for the uniform of the day.

Although not specifically required for CPOs, it's still a good idea to have your clothing marked. On items which are the same for chiefs as they are for other enlisted men, the location of the markings should be the same.—ED.

Staff Officer Precedence

SIR: We're a little confused. Recent examinations have contained questions about the precedence of staff corps officers. How are persons who normally study *Basic Military Requirements* supposed to arrive at the correct answer when *Basic Military Requirements* (NavPers 10054) Chapter 3, Figure 3-1, lists the precedence in one way, and *Navy Regulations,* Article 1303, lists it another? —D.A.F., PNC, USN.

• *There's a good reason for the confusion—"Basic Military Requirements" is incorrect.*

The correct precedence is: Line, Medical, Supply, Chaplain, Civil Engineer, Dental, Medical Service and Nurse.—ED.

Rule on Transfer to Retired List

SIR: I'm confused—unless the law has been changed again.

I recently requested an extension of my overseas duty tour until April 1960. Much to my delight the Bureau went me one better and extended by tour until August 1960.

Now for the confusion—I will complete 30 years' service, day for day, on 10 Jun 1960. The last time I read the law concerning retirement of 1101s, it stated that temps must retire by 30 June of the year in which 30 years' service is completed, or revert.

My question is: Can I stay in the Navy after 30 Jun 1960 as a LCDR, and if so, how long? I'm ready for another 30 years.—J. W. M., LCDR, USN.

• *It's too bad you can't stay another 30. The August date is correct, and it appears that you will be able to complete most, if not all, of your extension at your present duty station.*

Section 1305a, Title 10, US Code, requires that permanent warrant officers, including those who hold a temporary officer grade, be transferred to the retired list on the first of the month 60 days after completion of 30 years' service. The same information is contained in BuPers Inst. 1811.1A, Enclosure (3), Section B.

In your case this means that you will be transferred to the retired list not later than 1 Sep 1960.—ED.

Reenlistee Eligible for School

SIR: I have been trying to get Class "B" 1C Electrician School for the last three years. I now have the opportunity under BuPers Inst. 1133.5A, which guarantees me school when I reenlist.

But now I have another problem. I have been told by the personnel office that this situation applies only to those who are reenlisting for the first time.

I disagree. I have read and re-read the instruction and nowhere in it does it say that only first reenlistees are eligible.

What's your interpretation? —R. L. O., 1C1, USN.

• *Glad to clear this up. You are eligible for school when you reenlist. The reenlistment for school as an incentive is applicable no matter how many times you have reenlisted.*

Although the instruction you mention has now been superseded by Article 12.8 of the "Enlisted Transfer Manual," the conditions are still essentially the same.

Now that you know you're covered in regard to the reenlistment provision, if you are otherwise eligible for Class "B" School, put in your request.—ED.

What's in a Same?

SIR: On page 24 of your August issue there is a letter in which USS *Neosho* (AO 143) claims a "first" for her at-sea refueling of three ships at once. In your reply you say an old-timer remembered "seeing three ships of COMDESRON 17 refuel simultaneously from *the same* tanker way back in 1943."

Although the name is the same, the ships are not.

There have been several ships named *Neosho*.

The first was an ironclad which saw action in the Civil War.

Another was AO 23, which was moored at the fuel dock in Pearl Harbor on 7 Dec 1941 and sunk in May 1942 after being damaged in the Battle of the Coral Sea.

The next one was AO 48, which was commissioned in September 1942 and went on to earn 11 battle stars. She was transferred to the War Shipping Administration and disposed of at the end of the war. This must have been the ship you were referring to.

The present *Neosho*, AO 143, wasn't commissioned until September 1954.—James E. Roe, ET2, USN.

• *This just goes to show you how tricky words can be.*

Our old-timer didn't remember the name of the tanker he had seen in 1943, and we still don't know who she was.

When we said, "the same," we were referring to the fact that all three ships had refueled simultaneously from a single (or "the same") tanker—not from "the same" ship the letter writer was talking about.

As your letter discloses, it is possible to interpret "the same" to mean Neosho.

If it's all "the same" to you, we're going to make a pen-and-ink change in our copy of that issue so the phrase in question will read, "from a single tanker." It's all right with us for you to do the same. Happy now? Good.—The Same Old ED.

Got His Signal Wrong

SIR: Just recently I finally read a June 1959 issue of ALL HANDS and, after viewing the centerspread with considerable interest, I must admit that I'm confused.

According to NavAer 00-80ZD-1 (a chart showing standard aircraft taxi signals, which is posted in just about every hangar in the Navy) the emergency stop signal does not correspond with the one you pictured on page 32.

What happened? Have they changed to the old method?—E. S., AD1, USN.

• *Where have you been? The signals used in the centerspread of the June 1959 issue of* ALL HANDS *were taken from Standard Aircraft Taxi Signals (NAV AER 00-80ZD-1), revised 1959. That poster was issued in January 1951 and has been superseded.*—ED.

Ship Reunions

News of reunions of ships and organizations will be carried in this column from time to time. In planning a reunion, best results will be obtained by notifying the Editor, ALL HANDS MAGAZINE, Room 1809, Bureau of Naval Personnel, Navy Department, Washington 25, D. C., four months in advance.

• USS *Arizona* (BB 39)—A reunion of former members will be held at Long Beach, Calif., on 23 Apr 1960. For details, write to William E. Larsen, 4019 West 176th St., Torrance, Calif.

• LCI(L) *Flotilla Two*—A reunion is scheduled for 5, 6, and 7 Aug 1960 at the Hotel Warwick, Philadelphia, Pa. Write to Paul Carter, 804 Fourth Ave., Iowa City, Iowa.

• USS *Capella* (AK 13)—All who served on board during World War II and who wish to hold a reunion with time and place to be decided may write to William Junod, 302 Landis Ave., Oaklyn 6, N. J.

• USS *Cogswell* (DD 651)—All shipmates who are interested in holding a reunion may write to Thomas D. Castellani, 1013 West 4th St., Pittsburg, Kans.

• USS *Kittyhawk* (AKV 1)—All who served on board and who are interested in holding a reunion with time and place to be decided may write to Henry W. Stix, 2035 Calvin Cliff, Cincinnati 6, Ohio.

• USS *Langley* (CV 27)—All former ship's officers and air group officers who are interested in a reunion in the spring of 1960 may write to R. L. Merkel, M.D., Suite 302, National Reserve Building, Topeka, Kans.

• *36th Special Naval Construction Battalion*—All personnel who served in this outfit on Okinawa in 1945, and who are interested in holding a reunion in 1960, may write to Earl B. Cameron, HMC, USNR (Ret.), 704 Mercantile Library Building, Cincinnati 2, Ohio.

• *29 and 32d Reserve Divisions*, Milwaukee, Wisconsin—All who were assigned to these divisions before World War II and who are interested in holding a reunion late in 1960 may write to Frank Prebezich, 3900 North 88th St., Milwaukee, Wis.

Three or Four Engines?

SIR: The caption for the middle picture at the bottom of page 62 of your June issue has me baffled. It is possible that my perfect record of aircraft identification while training with the Air Force was just plain luck?

Since when was the history-making NC-4 a twin-engine flying boat? I had always thought she had three engines. —A. N. P., EX-USAF.

• *Sorry, but you've just busted up your 4.0 record (and our 1.5 isn't doing so well, either). We asked the man who knows all about such things and he tells us that the NC series did not have two engines (which we should have known), but not all of them had three engines, either. Some had four.*

As we understand the situation, the NCs (there was a total of 10) were originally designed for three engines. However, when the plans for the Atlantic flight shaped up, it was feared that the three engines would not develop enough horsepower, so a fourth engine was added to those planes (NC-1 through NC-4) which were to make the big jump. The propeller of the fourth engine pushed, instead of pulled, as it would in a conventional installation. Unfortunately, this fourth engine is not visible in the illustration to which you refer but the prop of the fourth engine can be seen on the NC-4 on page 48 of that same issue.

In short, NC-1 through NC-4 ended up with four engines; NC-5 through NC-10 with three engines. All clear?

At the moment, we can't think of a good alibi for including the NC-4 in a series of two-engine planes. But give us time. We will.—ED.

Role of Argentia

SIR: I was very much interested in your "How Did It Start" on Argentia, Newfoundland, on page 53 of the September issue.

However, some confusion arose in my mind.

The article says: "Throughout the war hundreds of railroad tank cars, box cars and refrigerator cars moved from Argentia to the large Army and Army Air Forces installations in Newfoundland."

Correct me if I'm wrong, but I don't believe there's a railroad running out of Argentia—or ever has been. There is one railroad running across the island from St. John's to Port aux Basque and this, I believe, is all.

As for Argentia being an all-winter, deepwater port—free of ice at all times —this may be true. However, I have always been under the impression that St. John's was considered the "year around port" for Newfoundland.

One last item: So far as history is concerned, Argentia played her greatest role when President Franklin D. Roosevelt and Prime Minister Winston Churchill signed the famous "Atlantic Charter" in Placentia Bay — not far from Argentia.— MSGT C. M. Cowan, USAF.

• *Your mention of the Atlantic Charter meeting is an interesting footnote to the Argentia story. We'll have to dispute some of your other points, however.*

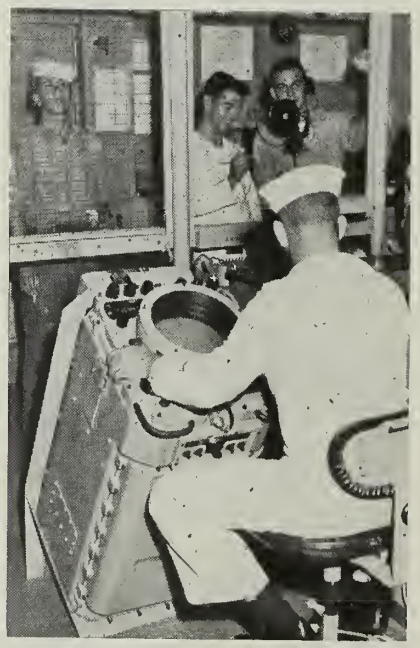
Argentia is served by a rail-line which joins the main St. John's-to-Port aux Basque railway at Placentia Junction—about 25 miles away. Naturally, the railroad to Argentia was a very busy one during the war.

At that time the island's narrow-gauge rail-lines were operated by the Newfoundland Government Railway. The system was made part of the Canadian National Railway when Newfoundland became a province of Canada. Both systems are government-owned.

Our statement that, "Argentia is the only deepwater harbor on the island to remain ice-free throughout the year," is based on information contained in a living conditions report prepared at Argentia and dated March 1959.—ED.

A Good Shot

SIR: Regarding the "glossy waters" photograph of USS *Ranger* (CVA 61) and *Rowan* (DD 782) which invited comment in your letters to the Editor section of the August issue—the unusual brilliance of the picture cannot be attributed to any special photo technique or darkroom chicanery, but rather to a natural combination of bright sunlight and an unusually calm sea. The photograph was one of a series shot between Valparaiso, Chile, and Callao, Peru, by C. E. Wall, PH1, of *Ranger's* Photographic Division during the carrier's cruise from Norfolk to Alameda last year to join the Pacific Fleet.



WE'RE HERE—CIC personnel on board USS *Ranger* (CVA 61) determine the position of their carrier at sea.

The camera used was an eight-and-one-quarter inch F-56, loaded with Recco Base Pan. The filter could have been a medium red (25A) or medium yellow. Negative was developed in D-76. Prints were on single weight bromide in D-72.

I have since noted with pleasure that this excellent series of photographs has invited favorable comment by all who have viewed them.—N. O. Keesling, LTJG, USN.

• *There is one point about which there can be no dispute—it was a good picture. Our local self-appointed experts are happy to hear that a filter was used.*—ED.

Air and Water Temperature

SIR: When I was sitting in the wardroom the other evening my commanding officer hailed me across the table and put forth a few questions for my consideration.

To say that I didn't have the answers at my fingertips would be a gross understatement. In fact, there were none available in the vast reservoir of knowledge accumulated after nearly two weeks at sea.

Here's what I need to know:

1. What is the highest and lowest air-temperature ever recorded by a ship? Where and when?

2. What is the highest and lowest injection-temperature ever recorded by a ship underway? Where and when? —S. D. T., ENS, USN.

• *Records are records only until some record wrecker wrecks them. Recognizing that someone in the Fleet is always ready to top us, we turned to the U. S. Naval Hydrographic Office, and they gave us facts and figures.*

The Norwegian ship Fram, *says Hydro, recorded the lowest air temperature while in the Arctic (frozen in) during the winter of 1893-1894. It was a cold, minus 62° Fahrenheit.*

The lowest water temperature was recorded by USS Glacier *(AGB 4) in the Antarctic in March 1956. It was plus 28.2° Fahrenheit.*

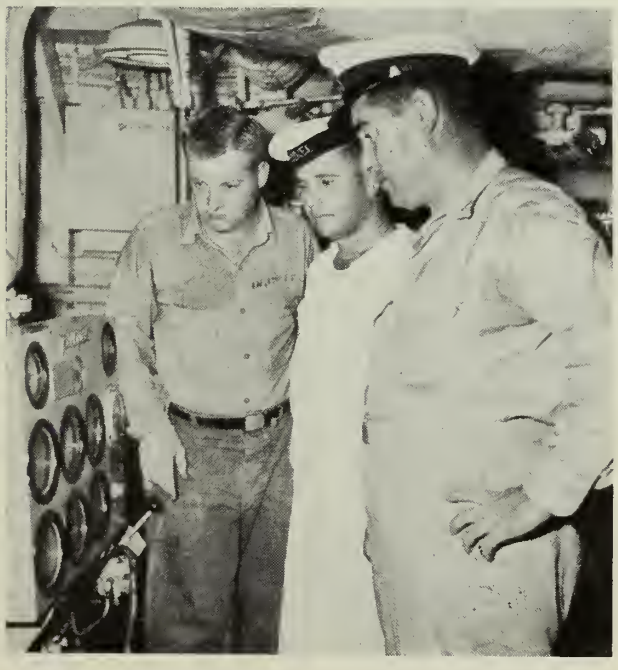
USS Zellers *(DD 777) has recorded both the highest air and water temperatures while operating in the Persian Gulf in August 1948. She recorded an air temperature of 130° F and a water temperature of 94° F.*

Lower and higher temperatures may have been recorded ashore. As an example, Paul Siple, in his new book, 90° South, *reports a temperature of minus 100.4° F at the South Pole. That's somewhat chilly, but, as yet, a ship has not been reported in that area. But there's always tomorrow.*—ED.

Spanish Minemen

MINEMEN at the Charleston naval base have had a Spanish flavor added to their training recently. Two U. S. minesweepers, USS *Bluebird* (MSC 121) and USS *Kingbird* (MSC 194), have been busy passing the word on minesweeping and the operations of an MSC to Spanish navymen who will take over ex-MSC 288 after they become familiar with the handling of this type of minesweeper.

Top left: F. C. Jove, EN2, USN, checks out winch controller during training session for Spanish sailors. *Top right:* Spanish chief boatswain's mate instructs fellow crew member in use of shackles on the forecastle of USS *Bluebird* (MSC 121). *Right:* Flag bag know-how is passed on to Spaniards by K. P. Hatchell, SM2, USN. *Lower right:* Spanish minemen check stress on minesweeping cable while training to take over MSC. *Lower left:* F. H. Brown, EN1, USN, explains throttle control board to Spanish chief and second class engineman aboard one of the minesweepers.



VETERANS BENEFITS BASED UP

BENEFITS

The purpose of this chart is to show the effect of the type of discharge upon possible eligibility to various rights and benefits.

No attempt is made to set forth other requirements of eligibility which must be met.

***WARTIME SERVICE REQUIRED**

BENEFITS	APPLICABLE STATUTE OR REGULATION	TYPE OF DISCHARGE						
		DISHONORABLE DD Form 260N	BAD CONDUCT DD Form 259N (Conditions Other than Honorable)		UNDESIRABLE DD Form 258N (Conditions Other than Honorable)			
		GENERAL COURT MARTIAL CONVICTION	GENERAL COURT MARTIAL CONVICTION	SPECIAL COURT MARTIAL CONVICTION	MISCONDUCT C-10112	UNFITNESS C-10111	SECURITY C-10118A	MISCONDUCT C-1012
I. BENEFITS ADMINISTERED BY THE VETERANS' ADMINISTRATION								
1. Wartime disability compensation*	38 USC 310							✓
2. Wartime death compensation*	38 USC 321							✓
3. Peacetime disability compensation	38 USC 331							✓
4. Peacetime death compensation	38 USC 341							✓
5. Dependency and indemnity compensation to survivors	38 USC 410, 416							✓
6. Service pension*	38 USC 510 et seq.							✓
7. Nonservice connected disability*	38 USC 521 et seq.							✓
8. Pensions to widows and children*	38 USC 541 et seq.							✓
9. Medal of Honor Roll*	38 USC 560 et seq.							✓
10. Hospital and domiciliary care	38 USC 610 et seq.							✓
11. Medical treatment (including dental)	38 USC 612 et seq.							✓
12. Prosthetic appliances	38 USC 613							✓
13. Seeing-eye dogs	38 USC 614							✓
14. Special housing	38 USC 801							✓
15. Burial benefits (flag and expenses)	38 USC 901, 902							✓
16. Vocational rehabilitation*	38 USC 1501 et seq.							✓
17. Education for Korean veterans*	38 USC 1601 et seq.							✓
18. War orphans education*	38 USC 1701 et seq.							✓
19. Home, farm, and business loans*	38 USC 1801 et seq.							✓
20. Autos for disabled veterans*	38 USC 1901 et seq							✓
II. BENEFITS ADMINISTERED BY THE MILITARY DEPARTMENTS								
1. Mileage	Joint Trav. Reg. ¶4157							✓
2. Mustering-out payment*	38 USC 2101							✓
3. Headstone marker (Sec. Army administers)	24 USC 279a							✓
4. Payment for accrued leave	37 USC 32 et seq.							✓
5. Transportation for dependents and household goods	Joint Trav. Reg. ¶3003–1a, ¶7011–5							✓
6. Burial in national cemetery	24 USC 281							✓
7. Retain and wear uniform home	10 USC 6297							
8. Notice to employer of discharge	BuPers Man. ¶C–10508							✓
9. Award of medals, crosses, and bars	10 USC 6249							✓
10. Admission to the naval home (Enlisted)	BuPers Man. ¶C–9209							✓
11. Travel in kind	Joint Trav. Reg. ¶S300	✓	✓	✓	✓	✓	✓	
12. Cash allowance ($25)	10 USC 6297	✓	✓	✓	✓	✓	✓	
13. Suit of civilian clothes ($30)	10 USC 6297	✓	✓	✓	✓	✓	✓	✓
14. Board for Correction of Naval Records	10 USC 1552	✓	✓	✓	✓	✓	✓	✓
15. Death Gratuity	10 USC 1480							✓
16. Navy Discharge Review Board	10 USC 1553			✓	✓	✓	✓	✓
III. BENEFITS ADMINISTERED BY OTHER FEDERAL AGENCIES								
1. Homestead preferences (Dept. Interior)*	43 USC 271 et seq.							✓
2. Civil Service employment preference (Civ. Ser. Com.)	5 USC 851							✓
3. Credit for retirement benefits (Civ. Ser. Com.)	5 USC 2251(r) et seq.							✓
4. Reemployment benefits (Sec. Labor)	50 APP. USC 459							✓
5. Naturalization benefits (U.S. Dist. Courts)	8 USC 1101, 1440							✓
6. Reclamation project homestead preference (Dept. Interior)*	43 USC 617h							✓
7. Employment as District Court bailiffs*	28 USC 755							✓
8. D.C. police, firemen, and teachers retirement credit	D.C. Code Tit 4, §521; Tit 31, §728							✓
9. Admission to low-rent public housing (PHA)*	42 USC 1402(14), 1410(g), 1415(8)							✓
10. Housing for distressed families of veterans (HHFA)*	42 USC 1573							✓
11. Preference in purchasing defense housing (HHFA)*	42 USC 1592a and 1592n(h)							✓
12. Farm loans (Dept. Agriculture)*	7 USC 1001(b)(2)							✓
13. Farm housing loans (Dept. Agriculture)*	42 USC 1477							✓
14. Unemployment compensation and employment service (Sec. Labor)*	38 USC 2007, 2010							✓
15. Social Security wage credits for WW II Service (Sec. HEW)*	42 USC 417							✓

Prepared by ALL HANDS Magazine

UPON TYPE OF DISCHARGE

TYPE OF DISCHARGE

GENERAL
DD Form 257N
(Under Honorable Conditions)

HONORABLE
DD Form 256N

SCONDUCT C-10312	UNFITNESS C-10311	SECURITY C-10310A	UNSUITABILITY C-10310	MINORITY C-10309	DEPENDENCY OR HARDSHIP C-10308	CONVENIENCE OF THE GOVERNMENT C-10306	DISABILITY C-10305	FULFILLMENT OF SERVICE OBLIGATION C-10304 & C-10317	EXPIRATION OF ENLISTMENT C-10304 & C-10317	
I. BENEFITS ADMINISTERED BY THE VETERANS' ADMINISTRATION										
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	1. Wartime disability compensation*
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	2. Wartime death compensation*
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	3. Peacetime disability compensation
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	4. Peacetime death compensation
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	5. Dependency and indemnity compensation to survivors
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	6. Service pension*
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	7. Nonservice connected disability*
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	8. Pensions to widows and children*
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	9. Medal of Honor Roll*
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10. Hospital and domiciliary care
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	11. Medical treatment (including dental)
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	12. Prosthetic appliances
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	13. Seeing-eye dogs
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14. Special housing
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	15. Burial benefits (flag and expenses)
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	16. Vocational rehabilitation*
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	17. Education for Korean veterans*
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	18. War orphans education*
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	19. Home, farm, and business loans*
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20. Autos for disabled veterans*
II. BENEFITS ADMINISTERED BY THE MILITARY DEPARTMENTS										
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	1. Mileage
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	2. Mustering-out payment*
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	3. Headstone marker (Sec. Army administers)
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	4. Payment for accrued leave
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	5. Transportation for dependents and household goods
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	6. Burial in national cemetery
				✓	✓	✓	✓	✓	✓	7. Retain and wear uniform home
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	8. Notice to employer of discharge
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	9. Award of medals, crosses, and bars
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10. Admission to the naval home (Enlisted)
										11. Travel in kind
										12. Cash allowance ($25)
✓	✓	✓	✓							13. Suit of civilian clothes ($30)
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14. Board for Correction of Naval Records
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	15. Death Gratuity
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	16. Navy Discharge Review Board
III. BENEFITS ADMINISTERED BY OTHER FEDERAL AGENCIES										
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	1. Homestead preferences (Dept. Interior)*
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	2. Civil Service employment preference (Civ. Ser. Com.)
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	3. Credit for retirement benefits (Civ. Ser. Com.)
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	4. Reemployment benefits (Sec. Labor)
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	5. Naturalization benefits (U.S. Dist. Courts)
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	6. Reclamation project homestead preference
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	7. Employment as District Court bailiffs*
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	8. D.C. police, fireman, and teachers retirement credit
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	9. Admission to low-rent public housing (PHA)*
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10. Housing for distressed families of veterans (HHFA)*
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	11. Preference in purchasing defense housing (HHFA)*
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	12. Farm loans (Dept. Agriculture)*
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	13. Farm housing loans (Dept. Agriculture)*
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14. Unemployment compensation – employment service
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	15. Social Security wage credits for WW II Service

KEY

- ✓ ELIGIBLE
- NOT ELIGIBLE
- ELIGIBLE IF ADMINISTERING AGENCY DETERMINES DISCHARGE WAS UNDER HONORABLE CONDITIONS, OR WAS NOT UNDER DISHONORABLE CONDITIONS, AS APPLICABLE

December 1959

★ ★ ★ ★ TODAY'S NAVY ★ ★ ★ ★

SLEEK JOB—USS *Willis A. Lee* (DL 4) has the latest in shipboard design to enable her to carry out mission as long-range Fleet unit and sub killer.

Hi-Fi for the Sonarman

High-fidelity tape recordings are now being used to help sonar operators distinguish the difference between false signals and tell-tale blips of actual submarines.

The new multi-channel tapes are used in a device at the Navy training schools in Key West, Fla., and San Diego, Calif. The Sonar Operators' Target Classification Trainer, as it is called, is linked side-by-side with actual sonar equipment. This allows trainees to monitor all the situations they may encounter at sea.

In addition to recognizing schools of fish which can cast an electronic shadow on sonarscopes, students must learn to identify underwater mountain peaks, old wrecks and even masses of floating plankton or kelp.

Developed under a contract with a civilian concern, the sonar trainer incorporates all types of sonar-received sounds to enable students to distinguish between actual submarines and non-submarine targets.

Names, Not Numbers

Four landing ships, previously known by number only, now have names of their own.

They are USS *Kodiak* (LSM 161), *Oceanside* (LSM 175), *Lakeland* (LSM 373) and *Raritan* (LSM 540).

LSM 161 and *LSM 175* were commissioned in 1944, the latter two the following year. The four are now the only ships of their type in use by the Navy.

LSM 161 is named for, and home-ported in, Kodiak, Alaska. *LSM 175*, home-ported in Long Beach, Calif., is named for Oceanside, Calif.

The other two, part of the Atlantic Fleet, are home-ported at Norfolk, Va. They are named for Lakeland, Fla., and Raritan, N. J.

YESTERDAY'S NAVY

On 7 Dec 1917 Battleship Division 9—consisting of USS *New York, Wyoming, Florida* and *Delaware*—arrived at Scapa Flow to join the British Grand Fleet as the 6th Battle Squadron. On 17 Dec 1862 a Naval Force under CDR J. Alden, cooperating with troops under GEN N. P. Banks, occupied Baton Rouge, La. On 17 Dec 1941 ADM Chester W. Nimitz was assigned to duty as Commander in Chief, U. S. Pacific Fleet. On 20 Dec 1882 Congress authorized the fitting out of a naval squadron to suppress piracy in the Caribbean. On 30 Dec 1941 ADM Ernest J. King became Commander in Chief, U. S. Fleet.

Tartar for DDs and Cruisers

Tartar, a supersonic guided missile which will be the primary missile antiaircraft battery aboard destroyers and secondary missile battery on cruisers, is now in production and will appear in the Fleet next year.

USS *Norton Sound* in recent months has been test-firing the *Tartar* missile off the California coast.

Since space aboard ships is severely limited, the use of miniaturization techniques was required to package the guidance, propulsion and construction systems into the small, light-weight air frame of *Tartar*. The complete missile is about 15 feet long and is slightly over one foot in diameter.

As part of the size-reduction objective, a small-stage, solid-fueled dual-thrust rocket motor was developed. Normally, a two-stage rocket propulsion system is used in this type of missile, the first stage dropping off after it is expended.

The dual-thrust rocket of *Tartar* achieves the same result with a single stage that is an integral part of the missile. A high-thrust, short-duration burning period serves to launch and accelerate the missile to supersonic speed. After this, a lower-thrust, longer-duration burning period maintains this high speed until target interception.

When the missile approaches within range of the target, the warhead is detonated.

Autonavigator

An inertial navigation system that will help to fix precisely the underwater launching position of *Polaris* ballistic missile submarines has successfully completed laboratory testing.

The *Polaris* guidance system must be given precise pre-launching position information in order for the missile to follow an accurate path to its target. This autonavigator, known as the N7A, will provide such information through the use of precision gyroscopes, acceleration-sensing instruments, and a digital computer.

The computer, known, as *Verdan*,

is a general purpose computer plus a "digital differential analyzer." Compressed into approximately one and one-half feet, it can be programmed to permit accurate navigation over all regions of the earth.

Verdan is designed so that its power may be interrupted without loss of stored information. It automatically marks its place in a computation whenever a power failure occurs. It retains the information indefinitely or until power is restored and the computation resumed.

Except for the platform, all of the N7A's electronic equipment is installed in a single, separate navigation console. One control panel contains all the system's controls.

Taking Pictures Under Water

The U. S. Naval Ordnance Test Station, China Lake, Calif., has developed a new underwater camera housing that may overcome many problems met with in deep underwater photography.

The camera housing is three feet in diameter, four feet long, and weighs 1000 pounds out of the water. Submerged, it weighs only 10 pounds and despite its enormous bulk is easy to maneuver.

The new housing is large because it must contain a 35-mm. motion picture camera, heating devices to protect the camera and film, humidity control equipment, and a leak detector.

This last item is most important, since cameras such as this usually stay in the water as long as 24 hours. If a leak does develop, it will be recorded on instruments ashore, and the housing will be brought up immediately.

Since these cameras were designed to use natural light, China Lake technicians have also developed an underwater light meter that works by frequency modulation. It gives off pips that are recorded on shore. As these pips are received, the camera lens may be corrected to obtain the proper exposure.

This underwater equipment is being used extensively at the Naval Ordnance Test Station's sea ranges off the California coast.

San Clemente Island is well adapted to underwater camera research because of its clear water, sandy bottom which reflects the light, and protected coves.

One problem still remains, however. Fish swim right up and look into the camera lens.

'SHIP SHAPERS'—W. E. Krueger, SFC, A. J. Fritz, EM1 (SS) pose with sub.

Citizens Cheer Nautilus *Homeported in Minneapolis*

Nautilus is doing much to help Navy recruiting in downtown Minneapolis, Minn.

This particular *Nautilus* is not, however, the same ship that went under the North Pole. The one pictured here is just 33 feet long. It appears in the Midwest at parades, fairs and other special occasions.

W. E. Krueger, SFC, USN, and A. J. Fritz, EM1(SS), USN, two Navy recruiters assigned to the Minneapolis Navy Recruiting Station, built *Nautilus* earlier this year. They had hull plans of the real USS *Nautilus*, SS(N) 571, to guide them.

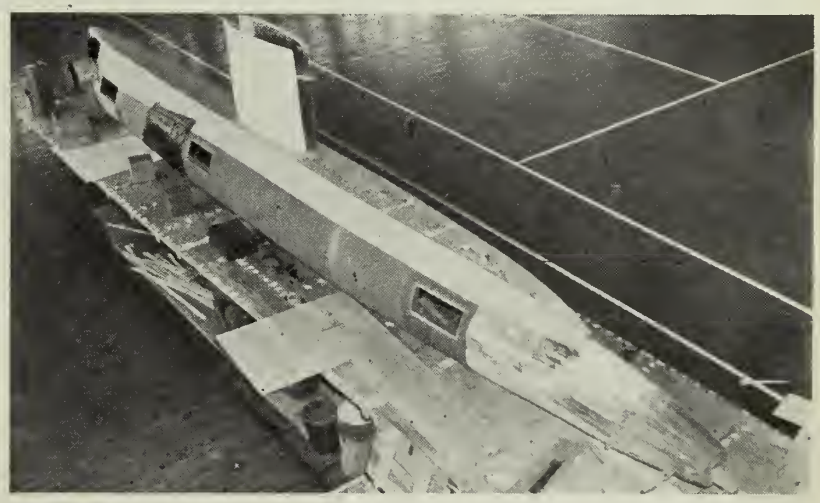
The men completed the 38-foot long, seven-foot wide, steel trailer in mid-January and laid the 33-foot keel of the submarine model soon after. It was on its way.

Strong plywood forms were attached to the keel. These became the base for the thin plywood hull plating. Black and grey fiberglass was applied to the entire hull and trailer bed which gave the float a permanent color and surfacing.

Krueger and Fritz then added electric motors, horns, sirens, lights, and many other devices. This *Nautilus* can now sound a diving horn; sound a siren; raise and lower its periscope; raise, lower, and rotate its radar antenna; turn its screws; manipulate its diving planes and rudder; and glow with more than 250 lights.

The *Nautilus* float has already logged over 4500 miles and 24 appearances in the midwest.

—LT William D. Folwick, USNR.



ON THE 'WAYS'—Model of *USS Nautilus*, SS(N) 571, took five months to build. Here plywood skin is nearly ready for black and gray fiberglass.

SERVICE JACKET

As the Navy went about its business:

• Our last non-atomic submarine, USS *Blueback* (SS 581), was commissioned.

• USS *Monticello* (LSD 35), of PHIBPAC, reported that 16 of its crew members received Good Conduct Medals within two months.

• Basic Training Group Three of NAAS Whiting Field won for the second consecutive year CNO's annual Aviation Safety Award in the heavier-than-air propeller class among basic training units.

• For the third successive year, Air Antisubmarine Squadron 27 earned the Battle Readiness Excellence Pennant. In addition, the squadron received the CNO Aviation Safety Award and a Commander Naval Air Force Atlantic Fleet Safety citation for a year of accident-free operations.

• USS *Maury* (AGS 16), the first U. S. Navy ship to visit the Black Sea since 1945, made a transit of the Dardanelles to visit Trabzon, Turkey. An earlier U. S. Navy visit was in 1922.

• A guided missile frigate, DLG 23, is to be named in honor of the late Fleet Admiral William F. Halsey, Jr. Construction is scheduled to begin this year at the Naval Shipyard, San Francisco.

• USS *Bryce Canyon* (AD 36) has won the Battle Efficiency Award for the fifth consecutive year.

• USS *Antietam* (CVS 36) has racked up its 65,000th arrested landing. It was made by Sub-Lieutenant Nils O. Floren, Royal Canadian Navy, who had reported to NAS Pensacola for flight training.

• The guided missile destroyer USS *Charles F. Adams* (DDG 2), which will have the new sea-to-air missile *Tartar* as a part of her armament, has been launched.

• Shortly before USS *Bennington* (CVS 20) pulled into the San Francisco Naval Shipyard for conversion to an antisubmarine carrier, she recorded her 56,000th landing. LTJG Marvin D. Madsen was the pilot.

• USS *Waller* (DDE 466) was host to some 120 dependents and guests during a recent one-day family cruise.

• DESRON six and DESRON 16 are home from the Sixth Fleet. The order of arrival of the returning ships was: USS Vesole (DDR 878), *Steinaker* (DDR 863), *Zellers* (DD 777), *Bigelow* (DD 942), *Moale* (DD 693), *William M. Wood* (DDR 715), *Allen M. Sumner* (DD 692), *Charles S. Sperry* (DD 697), *Ingraham* (DD 694), *Leary* (DDR 879), *Robert K. Huntington* (DD 781), *Noa* (DD 841), *Meredith* (DD 890), *Massey* (DD 778), and *Stribling* (DD 867).

• While conducting antisubmarine warfare exercises with the Seventh Fleet, USS *Redfish* (SS 395) registered her 5000th dive since her commissioning in April 1944. This averages over a dive a day for every day of the week, except Sunday, over the entire 15-year period.

• Two satellite recovery ships—USNS *Dalton Victory* (AK 256) and *Haiti Victory* (AK 286)— have joined the Pacific Fleet. They will relieve Fleet destroyers now being used to recover satellites launched into the Pacific Missile Range.

• USS *Bonefish* (SS 582) was commissioned at Pascagoula, Miss.

• A *Polaris* test vehicle has been successfully launched from USS *Observation Island* (AG 154), the first launch from a ship at sea.

• CDR Malcolm Ross, USNR, was presented the Distinguished Flying Cross for his part in the ONR Stratolab flight of July 1958.

• USS *Ranger* (CVA 61) has been awarded the Flatley Memorial Award in recognition of her outstanding safety record for fiscal year 1959.

• USS *Providence* (CLG 6) was commissioned at Boston, Mass.

• USS *Paul Revere* (APA 248) and the Naval Communication Facility, Kami Seya, Japan, received the 1959 Ney Memorial Award for outstanding food service operations.

• The P6M *Seamaster* program has been discontinued.

• With one 3-inch gun mount as her sole armament, USS *Takelma* (ATF 113) scored a perfect 100 in this year's competition to earn the right to display a gold "E" for gunnery.

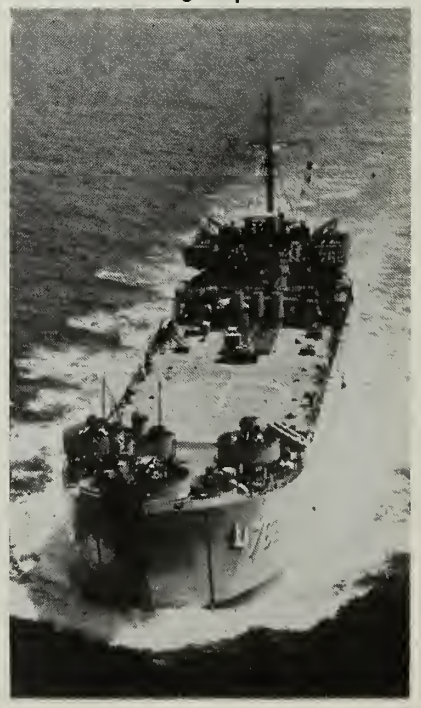
• As one phase of the Military Assistance Program, *MSC 279* has been transferred to the government of Spain.

• Fifteen CPOs formed the first class to complete the NAS Dallas, Tex., Leadership Course.

• USS *Franklin D. Roosevelt* (CVA 42) celebrated her 87,000th arrested landing with a cake to CDR W. J. Gray, commanding officer of VA-15, the pilot.

• USS *Conner* (DD 582), under terms of the Military Assistance Program, has been transferred to Greece.

SEA TO SHORE—*USS Floyd County* (LST 762) can deliver a big load to the beach during amphibious assault.



Record in Flight Safety

Navy flying is getting safer all the time. During fiscal year 1959, the Navy had the safest flight year in its history. This is the seventh consecutive year that the Navy has lowered its own aviation accident rate. The 1959 rate is one-half of the 1953 rate.

Between June 1958 and June 1959, over-all Navy flight operations were 7.2 per cent safer than in the previous year, when an all-time low accident rate had been established. During fiscal 1959, only 2.6 major aircraft accidents per 10,000 flight hours were recorded.

This new record of safety was set despite intensive carrier and other Fleet operations which resulted during the Lebanon and Formosan crises.

It was also the second year of extensive carrier operation of the Navy's new high performance jet aircraft. These new jets had an accident rate safer by 37.9 per cent

over last year. However, increased use of *Forrestal*-class carriers contributed to this reduced accident rate. The landing accident rate for these planes aboard the CVAs was about half that of the small *Essex*-class carriers. There was one fatal landing accident on the large carrier last fiscal year as compared with 10 on the smaller ones.

Many other factors influenced the prevention of accidents which involved Navy blimps, helicopters, seaplanes, and land-based patrol aircraft. The increased installation and use of airfield runway arresting gear has accounted for 340 reported saves.

Another factor cited is improved investigation-reporting procedures and the accident prevention program. The Navy now has a corps of over 600 aviation safety officers who are specifically trained for aircraft accident prevention and investigation.

An ejection seat whereby a pilot can escape from a plane any place from ground level up to all altitudes has also helped save lives.

Even though the average cost of each major accident has increased from $225,000 to $340,000 during the last two years, fewer accidents have lowered the over-all dollar losses since last year.

PacFit's Guided Missile Subs

The *Regulus*-launching submarine USS *Growler* (SSG 577) is the Navy's fourth guided missile submarine to be assigned to the Pacific Fleet. She is home-ported at Pearl Harbor with PACFLT's three other missile-launching subs.

Growler was commissioned in August 1958 and is the sister ship to USS *Grayback* (SSG-574) which is also based at Pearl Harbor.

In addition to *Grayback* and *Growler*, the other guided-missile submarines assigned to the Pacific Fleet Submarine Force include USS *Tunny* (SSG 282) and USS *Barbero* (SSG 317). *Growler* reported to Pearl Harbor in September while *Barbero* reported in August. Both were formerly assigned to the Atlantic Fleet Submarine Force.

The *Regulus*-launching *Growler* is 317 feet long and displaces 2400 tons. She is armed with the most advanced operational torpedoes and sonar which enable her to defend herself and perform ASW missions in addition to missile duties.

Navy's Baker Gets a Bungalow in Florida

Baker, the U. S. Navy's space monkey, has moved into her new, specially designed quarters at the U. S. Naval School of Aviation Medicine, Naval Air Station, Pensacola, Fla.

The quarters, designed and built under the supervision of the medical research staff, isolate Miss Baker from contagious diseases, but still allow close surveillance. As the first space monkey, Baker is of great interest to medicine and science.

Miss Baker's home is a stainless steel cage inside quarters that are both air-conditioned and heated.

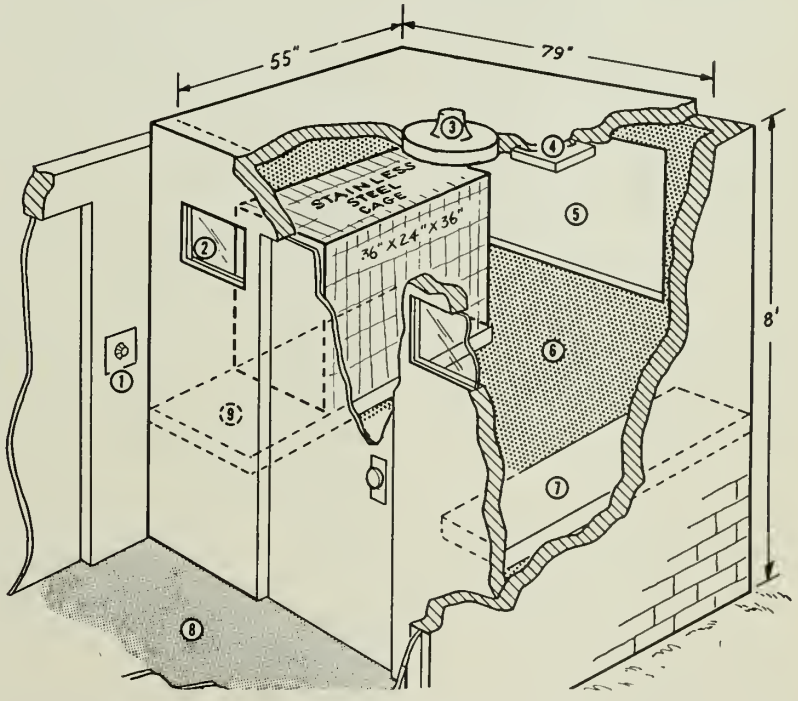
The cage has a beam of three feet, is three feet high, and measures two feet bow to stern.

On the entrance side of the quarters are two windows, 12 inches by 15 inches. These are one-way windows which allow observers to look in without Baker's being able to see out. To Baker, the windows appear to be mirrors.

Opposite these is a large observation window 36 inches by 52 inches made of regular glass. This allows late afternoon sunshine to enter, and permits Baker to see her visitors.

SPACE TRAVELER Baker has a new specially built home at Pensacola.

The new quarters have not only been designed as a home for Baker, but also as a bridal suite. She is due to be married when a suitable husband is selected. At present, one of Baker's girl friends is sharing her new home.



BAKER'S HOME—numbers indicate: (1) Rheostat light control (2) One-way window (3) Ventilator (heating and cooling) (4) Light controlled by rheostat (5) Outside observation window (6) Hard-surfaced, plastic-covered walls and ceiling (7) and (9) Hard-surfaced plastic-covered benches (8) Observation room for Baker.

Deep Diving Parachute Rigger Is a Malacologist

Eleven years of skin diving and five years of combing the ocean floor for shells have turned Chief Parachute Rigger Roland M. Gray into a malacologist.

Chief Gray, a Navyman for 16 years, is now assigned to the survival shop of Air Transport Squadron Eight at NAS Moffett Field, Calif. He began skin diving "just for the experience" more than 11 years ago.

After six years of underwater exploration, he "got tired of looking at fish" and turned to collecting shells. Now, as an avid collector, or malacologist, he has gathered a $1200-collection.

Although he picks up many types of shells, the chief's main interest is in those of the Cowrie family. The rest he uses for swaps with other malacologists. So far, his exchanges have touched England, Australia and South Africa.

The Cowrie shell is distinguished by its oval shape and high gloss. In its "live" state the shell is covered by the mantle of its inhabitant, the sea snail. (The mantle is a dull-colored fleshy projection that blends with surroundings and makes discovery difficult.) Many such shells are found in coral formations, so it takes a bit of prodding to get them out. For this purpose, Chief Gray carries a crowbar along when he dives.

The chief's favorite specimen is a pure white shell, about four inches long, which has a particularly high gloss. He says this one is so rare that many sea museums and experienced malacologists have never seen it in its natural state. The shell is valued at over $100. Many of the others in his collection are worth several dollars apiece. The shells range from about one quarter of an inch to six-and-one-half inches in length.

Chief Gray personally dived for most of the items in his collection. However, one shell was found by a dredging crew in 85 fathoms of water, and some of the others were discovered in the stomachs of fish from the coast of Australia.

The chief's collection now includes over 800 specimens. He keeps most of them in a special chest with divided drawers for various categories and species. Of the 165 known types of Cowrie shells, Chief Gray has 135 varieties.

SHELL GAME—R. M. Gray, PRC, poses with some of the 800 cowrie shells he has collected while skin diving.

Mrs. Gray helped her husband find some of the specimens. She has only one complaint about his interest —"It takes two weeks of just packing shells every time we move."

—Ron Walker, JO2, USN.

The River of 99 Turns

Seaplane tender USS *Salisbury Sound* (AV 13) made her way slowly up "The River of 99 Turns," stuck her bow into a muddy bank, swung her stern around and moored pierside at Saigon where she was welcomed by thousands of Viet-Nam citizens. Thus began a visit that was one of the highlights of the tender's Far East tour.

About an hour after berthing *Salisbury*, sailors began to hold open house. During the three days in this port over 7000 people visited the ship. Most of these were enthusiastic Vietnamese civilians but several hundred from the country's navy and army came aboard with a friendly welcome and also a keen interest in the running of the ship. Local youngsters were given an extended tour that included cake and ice cream in the crew's mess. Climax of these tours was the visit of the President of the Republic of Viet-Nam, Ngo Dinh Diem, who was received with full honors.

As *Salisbury Sound* pulled away from the pier and the waving crowds, it was with the feeling of parting from good friends and allies after a pleasant visit with the Viet-Namese.

Biggest Blimp Yet

Airship Airborne Early Warning Squadron One (ZW-1) based at NAS Lakehurst, N. J., is carrying out some of its AEW detection and tracking missions these days in the biggest blimp ever built.

First airship designed strictly for AEW duties, the ZPG-3W is 403 feet long, 118 feet high, and contains one and a half million cubic feet of helium in her cotton neoprene envelope.

The huge blimp carries a crew of 25 on one-to-two-day patrol missions as a part of the AEW network of the North American Air Defense Command. She's armed with a new radar detection system, the APS 70, which receives signals from the largest antenna ever lofted by any aircraft.

ZPG-3W is powered by two 1500-hp engines, nearly twice as powerful as those used in her predecessors. She is the first of four of her type scheduled to be in operation with ZW-1 by next January.

Davy Jones Gets TV

Underwater television equipment, built for the Bureau of Ships, has now been used in successful ocean bottom surveys at depths of more than 600 feet.

Designated AN/SXQ(XN-2), the new TV system has made it possible for the first time to achieve a continuous, remotely controlled visual survey at such depths. The equipment is primarily designed for salvage and search operations. It includes a closed-circuit television system, an underwater lighting system and a movable camera housing capable of training 70 degrees in any direction.

The camera and its self-propelled unit are remotely controlled via a multi-conductor cable from a control ship. The propulsion system enables the underwater vehicle to hover at any desired depth, despite currents and tides of several knots.

With suitable accessories, the vehicle could be used to collect samples and specimens from the ocean floor, or to retrieve sunken objects.

Built-In Sonar

The Navy has awarded contracts totaling $30 million to develop and produce a new sonar device for submarines.

The new sonar system will be one of the most comprehensive detection

systems ever devised for underwater craft.

It will form an integral part of the hull design, a new concept in submarine construction. In the past, sonars were fitted into existing hulls. By being built in, the electronic gear not only can be packed into a relatively tight space, but can also be located in the most favorable position on the submarine.

Submarines carrying this new system will be able to locate their targets—both submarines and surface craft—from much longer distances. The new sonars are also expected to add considerable flexibility to submarine tactics. Findings can be relayed to companion sub-killers for coordinated attack, and an attack can be made from a concealed underwater position, eliminating the need to surface to periscope height for visual sighting.

MODEL AIRMEN—J. F. Certain, AB2, (left) and J. D. Siebenhaar, AQ2, of *USS Hancock* (CVA 19) check winner in National Model Airplane Contest.

Prop Twisters

Two enlisted men from the attack aircraft carrier USS *Hancock* (CVA-19) represented the Navy in the National Model Airplane Champion Meet at NAS Los Alamitos, Calif.

They were Jack D. Siebenhaar, AQ2, USN, and James F. Certain, AB2, USN.

In the National Meet's control line jet speed class, Aviation Boatswain's Mate Certain served as pitman while Aviation Fire Controlman Siebenhaar piloted his jet-propelled model at 127 miles per hour to take third place. (Top speeds were held down during the meet owing to unfavorable weather conditions.)

Siebenhaar also finished sixth in the control line scale model class.

While waiting at NAS Alameda for transportation to Hawaii where the *Hancock* modelers were to rejoin their ship, they took part in another meet held by the Peninsula Prop Twisters of San Mateo, Calif. In this meet Siebenhaar was also victorious as he flew away with top honors in the control line class.

Siebenhaar, who is president of the "Model Masters" — *Hancock's* model airplane club—has won 12 trophies so far this year. To date, his models have earned him a total of 46 trophies.

NAVY SNIPERS breeze along during intramural race at Fleet Activities, Yokosuka, Japan, while competing for berth in Yokosuka's championship race.

Two APDs Inactivated

Two PHIBPAC high-speed transports, USS *Diachenko* (APD 123) and *Begor* (APD 127), have reported to the Pacific Reserve Fleet for inactivation.

Diachenko, commissioned on 8 Dec 1944 at Quincy, Mass., is named for Alex Diachenko, a watertender second class who lost his life attempting to salvage the crippled destroyer *Eberle* in 1943. *Diachenko* was originally built as a destroyer escort. She reported to the Pacific Fleet Amphibious Force in February 1945.

Begor, named for Dr. Fay B. Begor, who was killed in action during the battle of Lae, New Guinea, was commissioned on 14 Mar 1945 at New Orleans, La.

She has several firsts to her credit and a last. She was the first American ship to enter Yokosuka Harbor at the end of World War II and the first ship to enter Haiphong, French Indo-China (*Diachenko* was the last to leave). *Begor* also served in the Bikini atomic tests.

Roll-on Roll-Off

The new roll-on roll-off shipping technique applied to the transfer of vehicles between ships at sea has proved highly successful during a recent joint Army-Navy test.

Taking part in this operation was USNS *Comet* (T-AK 269), which is assigned to the Military Sea Transportation Service and the Army's radically new lighter, *Lt. Col. John U. D. Page.*

During these first roll-on roll-off tests, *Comet* and the shallow-draft *Page* maneuvered into a stern-to-stern position and were linked together by a special hinged ramp. Vehicles from *Comet* were then driven onto *Page's* "flattop" deck.

During actual operations, however, *Page* would carry the vehicles to the beach and lower her bow ramp, permitting the vehicles to roll off toward their destinations. This phase of the roll-on roll-off operations had previously been tested and was omitted from the recent deep-water experiments.

The roll-on roll-off technique is being perfected to permit greatly accelerated cargo loading and unloading operations in time of war. In the event of a nuclear conflict, many important ports could be destroyed, necessitating over-the-beach loading and unloading operations.

Comet is the first military ship to be built which employs the roll-on roll-off principle. She is 499 feet long and can accommodate loaded vehicles ranging in size from jeeps to huge semi-trailers.

ROLL OFF—Tank rolls off *USNS Comet* onto flat top deck of Army's beach discharge lighter, *Lt Col John U. D. Page,* for landing on the shore.

Magnetic Flights

Two Navy planes have begun a series of surveys which will take them some 600,000 miles in flights to gather information for the 1965 world magnetic charts.

One of the planes, a WV-2 *Super-Constellation* transport, has already completed a 25,000-mile, month-long survey of the Pacific, and is now circumnavigating the globe. The other, an R5D transport, has completed one round-the-world survey and is now on a second trip.

The Survey aircraft are assigned to Fleet Aircraft Service Squadron 102 at NAS Norfolk, Va. Besides their regular crews, they carry geophysicists from the Navy Hydrographic Office during these flights.

Each plane has a Vector Airborne Magnetometer (VAM), developed by the Naval Ordnance Laboratory to measure the direction and intensity of the earth's magnetic field. In addition, the WV-2 carries an airborne neutron monitor, which provides continuous recordings of cosmic ray intensity.

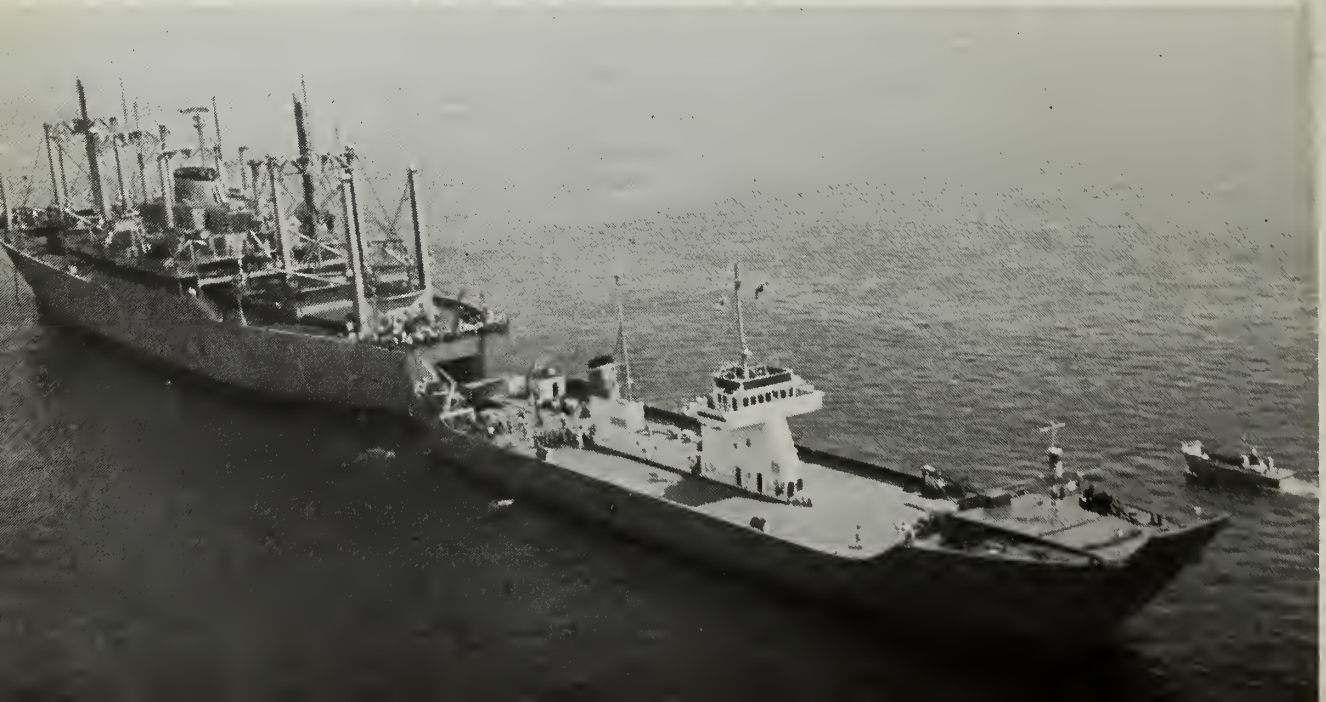
The flights are part of Project Magnet which is under the technical direction of the Hydrographer of the Navy. Project Magnet is an airborne geomagnetic survey for which the planes will follow tracks spaced about 200 nautical miles apart over all the accessible ocean areas of the world. Where practicable, polar regions and land masses will also be surveyed. Several globe-circling flights over the north and south magnetic and geographic poles are planned.

After the world-wide survey is completed in 1963, intermittent flights will be made over selected tracks to up-date the information.

Project Magnet will provide basic data for practically all United States nautical and aeronautical charts, and will lead to a more complete understanding of the magnetism of the earth. The charted information will be available to the maritime, aviation and scientific communities of the world.

Since 1951, the Hydrographic Office has been directing airborne geomagnetic survey work, and one survey was completed in the North Atlantic before the start of world-wide operations of Project Magnet.

ARMY-NAVY GAME—Navy's cargo carrier *USNS Comet* (AK 269) shows roll-on, roll-off technique with Army vessel.



Sailing Islands

RECENTLY TWO ISLANDS came together in the Arctic Ocean. One was the Fletcher's floating ice island and the other was Navy icebreaker USS *Staten Island* (AGB 5). The traveling island's residents included an Air Force "crew" and representatives of Navy's Underwater Sound Lab.

This marked the first time that the floating scientific research base had been reached by a ship. Previously, all personnel and supplies had been transported to and from the flat iceberg by planes flying out of Alaska and Greenland bases. However, from June to September, softening of the ice and snow runways limits delivery of supplies to these men to air drops.

Purpose of USS *Staten Island's* visit was to deliver a scientist from Navy's Underwater Sound Laboratory to help conduct coordinated under-water acoustic tests of the area. On departing, the icebreaker brought back two members of the island's staff who had completed five months' work there.

The ice island, named after an Air Force officer who was one of its first inhabitants, is a flat-surfaced iceberg four by 10 miles in size and 150 feet thick. Since its occupation for scientific studies in 1957 it has floated over 800 miles southwesterly and is now about 100 miles north of Canada's MacKenzie River delta.

Top: Island station is photographed from copter. *Right:* Navy scientist is flown aboard icebreaker. *Below:* USS *Staten Island* (AGB 5) moors at ice island.

SERVICESCOPE

Brief news items about other branches of the armed services.

THE U.S. AIR FORCE'S new Air Police Shield, worn on the left breast pocket, will replace the AP arm band.

The new AP badge is a 2½-inch long, 1½-inch wide metal shield. It is made of oxidized silver, and is oval in shape, has a blue and white baked enamel Air Force shield in the center and is surmounted by a spread eagle with a cloud bank background.

Each shield will have a serial number and will be assigned to a specific individual who must return it to the installation Provost Marshal when his tour of duty ends.

There are more than 35,000 Air Policemen and about 1000 Air Police officers in the USAF throughout the world. Each will be issued one of the new shields.

★ ★ ★

A CONTRACT has been awarded for production of a new quarter-ton utility truck that will succeed the jeep as the Army's tactical, commercial and reconnaissance vehicle.

It is lighter than the jeep and rugged enough to be dropped from an airplane. Among its other features are cross-country mobility, low fuel consumption and economy in maintenance.

The vehicle was developed under contract with the Army Ordnance Corps and pilot models have been under test since July 1954.

★ ★ ★

THE NATION'S FIRST PLANE designed for carrying man into outer space, the *X-15*, has successfully completed its first powered test flight. The *X-15* has been under development for the past five years. It is a joint project sponsored by the civilian National Aeronautics and Space Administration, the Air Force and the Navy.

The rocket-powered piloted projectile was released from the wing of a B-52 bomber at an altitude of seven miles. It then soared up to a height of 10 miles above California's Mojave Desert at 1400 miles per hour—which is about twice the speed of sound at that altitude.

NYLON PRINTS—Army has developed three dimensional finger printing, using nylon compound spray to cast.

The hybrid airplane and rocket roared around a 100-mile circle for three minutes. Then it coasted to a landing at the Edwards Air Force Base.

The *X-15* is designed to reach speeds as high as 3600 miles per hour and zoom to an altitude of 125 miles—far beyond the reaches of the earth's atmosphere.

The initial test flight was conducted by the builders of the 50 foot *X-15*. These powered-flight tests will gradually be increased in altitude and speed and the rocket ship will be turned over to the Air Force, perhaps next year.

Before this initial powered-test flight, *X-15* had undergone "captive flights" attached to the B-52, and a single free flight. The latter was a glide, without power, from a high altitude to the ground.

The space ship is now powered by an interim power plant consisting of two XLP engines which burn liquid oxygen and a water-alcohol compound. Ultimately, the *X-15* will be equipped with a single XLR-99 engine that burns anhydrous ammonia and is several times more powerful than its present power plant.

ON HIGH—USAF *Atlas* photographed earth at 200 miles (left) with main stage dropping, and at 700 miles.

THE ARMY HAS TAKEN THE WRAPS off its newest and largest ship, the 338-foot discharge lighter *Lt. Colonel John U. D. Page.*

Highly maneuverable, this radically new discharge lighter can sail sideways as well as forward and in reverse. It is especially adept in navigating shallow rivers and coastal waters.

Page is the result of years of research in the field of amphibious operations and with an eye to future combat concepts. It was designed to fulfill a need for moving vehicles from ship to shore over unprepared beaches.

This ship has no rudder and is propelled by two six-bladed variable axis propellers. They provide thrust as well as steerage.

★ ★ ★

A CENTRAL LABORATORY TO TEST and evaluate missile inertial guidance systems and components is scheduled to be built for the Air Force's Air Research and Development Command.

This laboratory will be built at the Air Force Missile Development Center at Alamogordo, N.M. When completed in 1963, nearly 350 engineers and technicians will be assigned to the lab.

The individual mechanisms which comprise missile guidance systems will be subjected to intensive examination and testing. These systems depend upon highly accurate instruments which measure the pitch, roll and yaw movements and other factors important to steering aircraft or missiles.

Besides the static lab facilities, the installation will use the 35,000-foot high-speed captive track, the stratosphere chamber and other equipment at the New Mexico Missile Development site to support the missile-systems testing program.

★ ★ ★

A 50,000-WATT NUCLEAR ENERGY REACTOR for biological research and medical treatment is scheduled for installation next summer at Walter Reed Army Medical Center, Washington, D.C.

The reactor, which weighs 450 tons, will be used for biological research and for treatment of patients at the Army hospital. It will be the largest atomic reactor available for treatment of general hospital patients and will produce gamma rays, neutrons, and radioisotopes.

The reactor's fuel solution of uranyl sulphate, highly enriched in Uranium 235, is contained in a 16-inch diameter, stainless steel sphere or core. The reactor core will be installed inside an eight-by-five-by-five-foot stack of graphite "logs" shielded by five feet of high density concrete. Over-all, the reactor will be about 20 feet long, 16 feet wide, and 26 feet high.

It will be self-contained with no harmful particles, fumes or smoke being exhausted into the atmosphere or public disposal systems.

★ ★ ★

HOW DOES IT FEEL TO BE CONFINED in a space capsule less than five feet high and three feet wide?

There are 40 Air Force officers, at the Wright-Patterson Air Force Base in Ohio, who can tell you just what's what. They recently completed a series of tests to see how man can withstand confinement in a tiny space capsule.

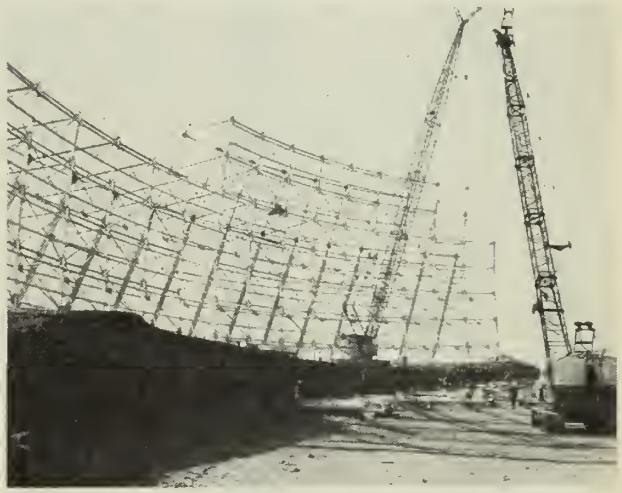
STRAIGHT UP—An Air Force *Bomarc,* long-range air defense interceptor guided missile, goes after target.

During these tests, the officers worked with psychologists and nutritionists at the Wright Air Development Center to help establish food requirements for space flights and to determine the effects of confined living on humans.

Each of the 40 volunteers spent 48 hours in the capsule, eating prescribed diets and taking various psychological tests.

Some of them lived on a "space diet," consisting mostly of liquids, semi-solids, and bite-size foods, while others dined on a conventional diet of everything from hamburger, baked pork chops, sandwiches, to broiled steak.

The tests enabled psychologists to get a chance to see how a man reacts to the closeness of the tiny capsule.



COOL CONSTRUCTION—Army Engineers are building Ballistic Missile Early Warning System for Air Force.

THE WORD

Frank, Authentic Advance Information On Policy—Straight From Headquarters

• **INITIAL SUBMARINE TRAINING** is now available to Machinist's Mates in all pay grades. Other rates needed for basic submarine training include Electrician's Mates, Enginemen, Electronics Technicians, Interior Communications Electricians, Sonarmen and Torpedoman's Mates in all pay grades.

Men in the EN, MM, IC, ET and EM ratings are needed particularly for basic and advanced training leading to eventual assignment in nuclear submarines.

These changes were announced in a memorandum change to the Enlisted Transfer Manual. They are the result of the expansion of the Navy's Nuclear Power and Fleet Ballistic Missile Submarine Programs that are now under way.

• **SKY DIVING, ANYONE?** — If you're a sky diving enthusiast, interested in forming a club to help popularize the spread of this exciting sport at your base, you'll get plenty of official backing.

Before you rush out to price used parachutes, or start badgering the operations department for the use of a plane, there's one important visit you should make—to your Base Administrative Office for a copy of SecNav Inst. 1700.6.

This instruction authorizes and encourages Navy participation in sky diving — or competitive parachute jumping, to give it its official designation—so long as it is properly planned and supervised.

It outlines extensive rules and regulations governing elegibility, establishment of clubs, use of Navy equipment and aircraft, safety precautions as well as the command responsibility.

• **DRAFTSMAN, SURVEYOR RATINGS** are being streamlined to bring them more in line with the demands of today's Navy.

Draftsman, which was a general service rating, has been changed to Illustrator Draftsman (DM) and is now a general rating for all pay grades. Under this revision, all five of the DM emergency ratings have been dropped.

In the new Illustrator Draftsman (DM) rating, emphasis will be placed on illustrative skill and knowledge as well as the previously required working know-how of basic mechanical and electrical drafting.

The general rating of Surveyor (SV) has been changed to Engineering Aide (EA) for pay grades E-6 through E-9, while two new service ratings—Engineering Aide D (Draftsman)—EAD, and Engineering Aide S (Surveyor)—EAS, have been established for pay grades E-4 and E-5.

The new EA ratings will include those skills and knowledges related to surveying, as well as those that concern structural, topographical, and construction drafting; materials testing, and materials estimating.

The initial input into the new EA ratings will come from personnel now in the SV rating and those of the DM rating that are experienced and assigned to activities of the Naval Construction Force.

The normal path of advancement for Illustrator Draftsmen from enlisted to officer status will be to Limited Duty Officer, Administration; while the Engineering Aides will go to LDO in the Civil Engineering Corps.

• **FEBRUARY EXAMS**—Before you make any big plans for February 1960, chances are you'll want to check the dates of the service-wide examinations for advancement in rating. So—just in case you haven't already marked your calendar—here is the schedule:

For Advancement

to:	*Day*	*Date*
CPO	Tuesday	2 Feb
PO3	Thursday	4 Feb
PO2	Tuesday	9 Feb
PO1	Thursday	11 Feb

The exam dates were announced in BuPers Notice 1418 of 27 Oct 1959. According to that directive the February exams will involve a number of changes in such administrative matters as the ordering of examinations, processing and the submission of returns. Most of these changes are associated with the adoption of punched card examination materials and the installation of electronic computers at the Naval Examining Center to process exams more accurately and rapidly.

Inaugurated in August 1959, the punched card system enabled the Examining Center to announce the results of the August exams a month earlier than had been possible with previous methods.

Besides calling for changes in administrative procedures, BuPers Notice 1418 contains three items of particular interest to Navymen in the ratings mentioned below.

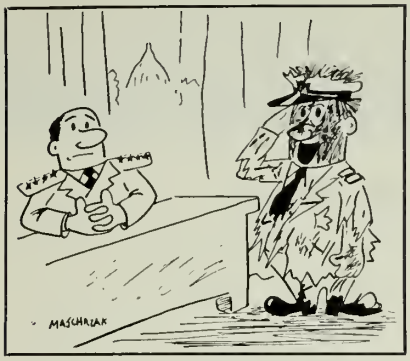
The first concerns service school requirements for advancement, which will be as follows for these rates:

PR3—Parachute Riggers Survivalman, Class A, or Parachute Riggers, Class A.

PT (all grades) — Photographic Interpretation School, or Photo Reader Course at a Fleet Air Intelligence Training Center.

"YOU CAN BE Santa Claus to nine other Navymen by passing ALL HANDS on to those who are waiting for it."

David J. Majchrzak, DN, USN



"Our new hand bomb has just been proven successful."

HM3—Hospital Corps School, Class A.

DT3—Dental Technician School, Class A.

MUCA—Advanced Music, Class B.

AGCA—Aerographer's Mate, Class B.

The second item is a reminder that these service rates within the Sonarman rating were established under BuPers Notice 1440 or 20 Mar 1959—SOG (Sonarman, Surface); SOS (Sonarman, Submarine); SOA (Sonarman, Airborne); and SOO (Sonarman, Oceanographer). Only seaman are eligible to compete for advancement to SOG3, SOS3 and SOO3. However, both seaman and airman may compete for SOA3.

• **LONGER SHORE DUTY TOURS FOR SOME RATINGS** — Eleven ratings in Seavey Segment One (1960) will get longer shore duty tours under a recent readjustment of shore tours.

Segment One ratings will start to receive orders to shore duty in Feb 1960 (see ALL HANDS, Nov 1959, page 45.)

Ratings affected by the readjustment are:

Rating	Old Tour (Mos.)	New Tour (Mos.)
NWC	24	30
MNC, 1	36	42
GSC, 1, 2	30	42
ETC	30	36
RMC	24	30
DMC, 1, 2	36	48

Increases in normal tours of shore duty are effective for all personnel in the above listed ratings whose current shore tours expire 1 May 1960 or later, or who report for a normal tour of shore duty after 31 Aug 1959.

Continuing readjustments of normal tours in all ratings are contemplated until tours ashore support the average minimum sea tour of approximately three years.

Present normal tours of shore duty in all ratings are:

Rating	(Mos.) Tour Length	Rating	(Mos.) Tour Length
BMC	30	PMC	30
BM1, 2, 3	24	PM1, 2, 3	24
QMC	30	MLC	30
QM1, 2, 3	24	ML1, 2, 3	24
SMC	30	CEC	30
SM1, 2, 3	24	CE1, 2, 3	24
RDC	30	EOC, 1, 2	30
RD1, 2, 3	24	EO3	24
SOC	30	CMC, 1	30
SO1, 2, 3	24	CM2, 3	24
TMC	30	BUC	30
TM1, 2, 3	24	BU1, 2, 3	24
NWC	30	SWC	30
NW1, 2, 3	24	SW1, 2, 3	24
MNC, 1	42	UTC	30
MN2	36	UT1, 2, 3	24
MN3	24	ADC, 1, 2	36
GSC, 1, 2	42	AD3	24
GS3	24	ATC, 1, 2	30
ETC	36	AT3	24
ET1, 2	30	AOC	30
ET3	24	AO1, 2, 3	24
IMC	30	ACC, 1, 2	36
IM1, 2, 3	24	AC3	24
OMC	30	ABC	36
OM1, 2, 3	24	AB1	30
RMC	30	AB2, 3	24
RM1, 2, 3	24	AEC	30
YNC, 1, 2	48	AE1, 2,3	24
YN3	24	GFC, 1, 2	36
PNC, 1, 2	48	GF3	24
PN3	24	AMC, 1, 2	30
SKC	30	AM3	24
SK1, 2, 3	24	PRC	36
DKC, 1	36	PR1, 2	30
DK2, 3	24	PR3	24
CSC	30	AG1, 2	36
CS1, 2,3	24	AG3	24
SHC	30	TDC, 1, 2	36
SH1, 2, 3	24	TD3	24
JOC, 1, 2	48	AKC, 1, 2	36
JO3	24	AK3	24
DMC, 1, 2	48	PHC, 1, 2	36
DM3	24	PH3	24
ENC	30	HMC, 1	42
EN1, 2, 3	24	HM2	30
MRC	30	HM3	24
MR1, 2, 3	24	DTC, 1	48
ICC	30	DT2	30
IC1, 2, 3	24	DT3	24
DCC	30	SDC	30
DC1, 2, 3	24	SD1, 2, 3	24

The change to the *Enlisted Transfer Manual* which announces the readjustment of shore duty tours, also reminds commanding officers that it is necessary to prepare diary entries for all personnel eligible for readjusted tours.

Failure to include a corrected shore tour completion date into the manpower information system will result in men receiving orders at the completion of their old tour date.

For further information on the February exams, see BuPers Notice 1418 of 27 Oct.

QUIZ AWEIGH

If you saw the uniforms in last month's issue and reviewed the 1959 issue of *Uniform Regulations*, you should have no trouble answering the first two questions in this month's quiz.

1. Large medals are worn with (a) service dress uniforms, (b) full dress uniforms, (c) evening dress.

2. Ribbons may be worn instead of medals with (a) service dress uniforms, (b) full dress uniforms, (c) tropical white long uniforms.

3. This team of Navymen is ready to "stream gear." The float they are putting over the side is called a/an (a) "oscar," (b) "pig," (c) "banana float."

4. They are preparing to (a) moor their boat, (b) recover torpedoes, (c) sweep mines.

5. The insigne shown above is that of an Air Force staff sergeant which is in the same pay grade as a Navy (a) PO1, (b) PO2, (c) PO3.

6. The Marine Corps is represented by the insigne shown here. It denotes (a) staff sergeant, (b) gunnery sergeant, (c) first sergeant.

You'll find the answers to this month's Quiz Aweigh on page 57.

THE BULLETIN BOARD

How to Request Duty to New Construction and Conversion Ships

THE NAVY CURRENTLY has approximately 70 new ships, exclusive of submarines, that are actually under construction, 15 more being converted to other types or for special duties and many more authorized to be built or scheduled for conversion.

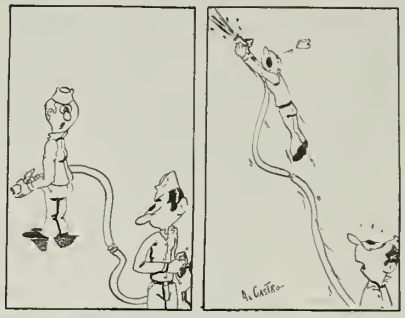
These ships range from tiny coastal minesweepers to nuclear-powered guided missile frigates and destroyers, to gigantic atomic aircraft carriers. And before too long, these new and converted ships will need crews to man them.

In this respect, have you ever wondered just how a new or converted ship gets its crew or how you would go about requesting assignment to one of them?

Well, whether you have thought about it or not, here's the scoop.

The officer and enlisted personnel who comprise the crews of new construction/conversion ships are normally ordered in two general groups —the nucleus crews reporting to the building or conversion yard and the balance of the crew to a Fleet training center for precommissioning training.

All Navy Cartoon Contest
A. B. Castro, SA, USN



"Turn it on." "Turn it off!"

The nucleus crew of key petty officers (approximately 20 per cent of the ship's allowance) normally reports to the naval activity in the vicinity of the shipyard some 10 weeks in advance of the completion or commissioning date. A large percentage of supply and engineering personnel are usually included as part of the nucleus crew.

During the precommissioning period, these men assist in assembling the precommissioning outfit and witness tests of machinery and equipment. They learn the techniques of reactivation if their ship is to be reactivated. They also become familiar with the details of operation of the ship and its equipment and they serve as on-the-job instructors for the balance of the crew as it reports.

The rest of the crew is usually ordered to a Fleet training center for precommissioning training of approximately four weeks or 20 days of instruction. This is normally scheduled to permit them to report aboard one week before commissioning date.

(Precommissioning training is officially defined as "the organizing and training of crews for ships scheduled to be activated, converted, or newly constructed, so that they may satisfactorily undergo shakedown training after commissioning. Peacetime precommissioning training serves the additional purpose of establishing the procedures that will be used in times of national emergency.")

The entire crew for new construction and conversion ships are detailed by the Fleet commanders from Fleet sources. However, the Chief of Naval Personnel coordinates these assignments. Approximately seven months before the actual commissioning date, the Chief of Naval Personnel issues a directive to EPDOLANT or EPDOPAC as appropriate.

All this is very fine, but just how do you go about getting assigned to a new or converted ship?

If you are now serving ashore, you may indicate your preference for a specific new ship or one that is being converted when you fill out your Shorvey data card. However, in doing so, you must consider the

Ships Undergoing Conversion and New Construction

Here's a list of new ships (exclusive of submarines), as well as those being converted that are currently scheduled to be commissioned within the next year. If you are interested in being assigned to any one of them, see story above for further information.

NAME AND TYPE OF SHIP	*LOCATION OF BUILDING YARD*	
NEW CONSTRUCTION:		
USS *Long Beach*, CG(N) 9	East Coast	September 1960
USS *Kitty Hawk* (CVA 63)	East Coast	November 1960
USS *Charles F. Adams* (DDG 2)	East Coast	September 1960
USS *John King* (DDG 3)	East Coast	December 1960
USS *Lawrence* (DDG 4)	East Coast	November 1960
USS *Henry B. Wilson* (DDG 7)	East Coast	November 1960
USS *McMorris* (DE 1036)	East Coast	March 1960
USS *Farragut* (DLG 6)	East Coast	April 1960
USS *Luce* (DLG 7)	East Coast	August 1960
USS *Macdonough* (DLG 8)	East Coast	November 1960
USS *Coontz* (DLG 9)	West Coast	July 1960
USS *King* (DLG 10)	West Coast	November 1960
USS *Mahan* (DLG 11)	West Coast	October 1960
USS *Dewey* (DLG 14)	East Coast	December 1959
USS *Preble* (DLG 15)	East Coast	May 1960
USS *Albatross* (MSC 289)	West Coast	July 1960
USS *Gannet* (MSC 290)	West Coast	September 1960
CONVERSIONS:		
USS *Proteus* (AS 19)	East Coast	June 1960
USS *Currituck* (AV 7)	East Coast	August 1960
USS *Little Rock* (CLG 4)	East Coast	March 1960
USS *Oklahoma City* (CLG 5)	West Coast	July 1960
USS *Springfield* (CLG 7)	East Coast	March 1960
USS *Topeka* (CLG 8)	East Coast	April 1960
USS *Coral Sea* (CVA 43)	West Coast	January 1960

prospective commissioning date of that particular ship in relation to your date of availability for transfer to sea duty.

If you are at sea, you can apply when your Force Commander calls for volunteers or nominations. When the Chief of Naval Personnel issues a directive to EPDOPAC or EPDOLANT, as described above, they in turn request the Force Commanders to provide the required personnel for the ship. The Type Commanders normally fill these billets from volunteers within their particular commands or from already established waiting lists.

As an example, let's take the case of the destroyer USS *Turner Joy* (DD 951), recently commissioned at Seattle, Wash. Last January, about seven months before her scheduled commissioning, the Chief of Naval Personnel issued a directive to EPDOPAC stating *Turner Joy* requirements. Upon receipt of this order, EPDOPAC in turn asked COMCRUDESPAC to provide the personnel needed to make up *Turner Joy's* crew. As *Joy* was built on the West Coast, it was EPDOPAC's responsibility to provide all ratings required for the nucleus and the balance of her crew except special detailed personnel furnished by the Bureau.

The crews of new constructions or conversions usually come from the Fleet depending upon the coast on which the ship is being built or converted. *Joy's* crew came from PACFLT because she was built on the West Coast; the attack aircraft carrier *Kitty Hawk* (CVA 63), being built at Camden, N. J., will receive her crew from the Atlantic Fleet even though she is ultimately scheduled to be assigned to the Pacific Fleet.

If you are interested in being assigned to a new ship now under construction or one that is being converted, check the listing (on page 00) of ships scheduled to be commissioned within the next year.

Scholarship Is Offered for Candidates Applying for USNA

The Naval Officers' Wives' Club of Washington, D. C., will award a self-aid scholarship grant in 1960 to a student between the ages of 16 and 20 years who wishes to prepare for entrance to the U. S. Naval Academy and become a career naval officer.

The grant of at least $500 will be made on the basis of need, mental and physical superiority, qualities of leadership, and evidence of a sincere desire to make a career in the Navy.

The money must be used for the recipient's work during his senior year in secondary school (or for post graduate secondary school work) and for other expenses in connection with academic preparation for the Naval Academy. The school he attends must be recognized by the U. S. Navy as giving adequate preparation for a person's entrance to the Academy.

A doctor's certificate must be submitted that shows the applicant is fully qualified to pass the physical examination for entrance to the U. S. Naval Academy.

The recipient will be selected by a Scholarship Selection Committee appointed by the Naval Officers' Wives' Club. Payment of the grant will be made directly to the approved school of the recipient's choice. It is a one-year grant and may not be renewed.

Applications are available from, and should be returned to, the Dependents Aid Section, Pers G221, Personal Affairs Division, Bureau of Naval Personnel, Washington 25, D. C.

Applications for the current award must be received by the scholarship committee before 20 Apr 1960.

WAY BACK WHEN

Naval Propellant Plant

The present U. S. Naval Propellant Plant at Indian Head, Md., had its origin as The Naval Powder Factory in 1898. The plant has remained in continuous operation since the first smokeless powder was produced there in June 1900.

In those early days, the Powder Factory was not the only facility at the Naval Station, Indian Head. In 1890 the Naval Proving Grounds had been moved there from Annapolis.

It wasn't long after production started at the Powder Factory that it became evident more space would be needed. In 1901, 1050 acres of adjoining land, known as Stump Neck, was added to the original 880 acres.

Five years later a sulfuric and nitric acid plant was added, and in 1907 a new powder reworking factory began operations.

Powder production and the testing of guns went their separate ways in 1921. The Naval Proving Grounds was moved to its present location at Dahlgren, Va. Eleven years later, in July 1932, the Naval Powder Factory became an independent command.

Just before the beginning of World War II, in 1940, the National Research Council established a Jet Propulsion Research Unit there. This group developed the now famous bazooka as an anti-tank weapon.

This was the beginning of the change from powder to propellants. In July 1943, the *Ballistics Laboratory* was opened to test ballistite grains.

Two years later, the million-dollar *Research and Development Laboratory* was completed. It was equipped with the most modern machinery for perfecting new explosives.

Patterson *Pilot Plant*, a factory for manufacturing experimental powder in small quantities, was added in 1949.

Later, four more plants began producing solid propellants:

- **The *Cast Propellant Plant*, which began operating on 16 Nov 1953, is a large-scale unit which produces solid cast propellants for missiles.**
- **The *Biazzi Panel Nitroglycerin Plant* has been producing 'nitro' for double-base, multi-base, and cast-type solid propellants since 23 Apr 1954.**
- **On 23 June 1954 the *Nitroguanidine Plant*, which produces nitroguanidine for multi-base propellants, began operations.**
- **The *Cordite "N" Plant*, which makes cool-burning propellants, went into operation six weeks later. The plant is now being used to develop plastisol nitrocellulose propellants and nitropolymers.**

To reflect its present products better, the name of the plant was changed in August 1958 to U. S. Naval Propellant Plant.

Here Are the Factors Deciding Whether You Will Draw Pro-Pay

YOU HAVE just finished competing for proficiency pay. Only time and the Naval Examining Center grading your exams can tell whether or not your pay will increase by $30 a month starting 16 Jan 1960.

If you are a career third or second class petty officer in any one of 44 critical ratings, your chances are good. (See the table below for actual number in each rating that may be awarded proficiency pay. Remember, third and second class petty officers will get the biggest slice.)

Under a recent revision of the pro-pay regulations, career personnel who pass the test will be in line to get the extra money first. The remaining allocations will go to non-career men who pass. For proficiency pay purposes, career personnel are those who have served, or are obligated to serve seven years' active duty.

Eighty-five per cent of all pro-pay will go to men in ratings which require long periods of specialized schooling or in-service training; require special technical or leadership aptitudes; have low first-term reenlistment rates; and have a shortage of career petty officers as related to requirements.

The table on this page will give you an indication of your chances of getting proficiency pay as a result of the examination you took in November.

This year, the pro-pay test was given in November for all ratings. In the future this will not be true. Men in pay grades E-4 and E-5 will compete annually on the first Tuesday in November, and those in pay grades E-6 and E-7 on the first Tuesday in May.

The next time E-6 and E-7 personnel may compete, however, is May 1961. To compensate for this, those first class and chief petty officers who are awarded proficiency pay as a result of the November 1959 examination will receive it for 18, rather than 12, months.

Proficiency pay awards will be based on a proficiency pay multiple which includes your *performance factors* and the result of the *service-wide competitive examination*. Selection will be made from those who pass the examination by awarding the money to career men first (in order of their multiple) and then to non-career men in the same manner.

The numbers in each rate, as shown in the table, may be awarded the extra money, provided a sufficient number have passed the exam to fill the quota for their rate.

Besides being assigned to a billet which utilizes your rating skill, BuPers Inst. 1430.12A lists certain other circumstances under which proficiency pay may be awarded or, once awarded, retained. They include the following categories:

- Personnel assigned or transferred to a course of instruction for conversion to one of the critical ratings.
- Personnel assigned or transferred to billets where they are in training for, instructing in, or serving in a special military program such as the Nuclear Power Program; or the BuPers-controlled instructor billets where personnel are screened and selected on a Navy-wide basis.
- Additional duty assignments not materially interfering with performance of your principal duties.
- Temporary or special duty not exceeding 90 days.
- Temporary duty or temporary additional duty while attending courses of instruction.
- Personnel in a transient status.
- Personnel on authorized leave.
- Personnel hospitalized for disease or injury not the result of his own misconduct after the date of the proficiency pay award. These men may continue to draw proficiency pay to which otherwise entitled for the remainder of their eligibility

Table Shows Allocation of Pro-Pay by Ratings

RATE	APPROXIMATE NO. PETTY OFFICERS	NUMBER WHO MAY RECEIVE PRO-PAY
BM	14,500	633
*QM	3700	574
*SM	2700	553
*RD	4700	3413
*SO	2800	1738
*TM	3200	386
GM	8200	384
*GS	650	340
*FT	4900	2103
*NW	400	229
MN	650	31
*ET	7000	2908
*IM	250	39
*OM	200	74
*RM[1]	10,700	3769
*CT	4500	869
YN[2]	12,700	588
PN	4500	207
*MA	850	119
SK	8100	374
DK	1900	92
CS	10,800	470
SH	4800	213
*JO	350	130
*LI	380	70
*DM	450	72
*MU	1000	301
*MM	12,500	2907
EN	10,500	510
*MR	1900	431
*BT	9200	1260
*BR	110	61
*EM	10,500	2244
*IC	2800	1260
*SF	6600	994
DC	3400	154
*PM	110	36
*ML	175	28
*SV	100	50
*CE	675	123
EO	1550	66
CM	900	42
*BU	1400	350
*SW	500	58
*UT	650	94
AD	21,200	845
*AT[3]	10,000	2825
AO	4800	209
*AQ	1400	328
*GF	650	102
*AC	3000	402
AB	2700	124
*AE	6500	1015
*AM	10,600	1378
PR	1300	60
*AG	1500	456
*TD	1300	268
AK	2600	116
*PH	2150	252
*PT	50	29
HM	14,300	619
*DT	1800	206
SD	7500	312
Total:	271,600	40,893
TARs	10,500	645
Recruiters	2000	87
Grand Totals	284,100	41,625

[1] Includes TE/RM
[2] Includes TE/YN
[3] Includes AL
* Critical rate

period, but in any event, for no longer than 12 months.

(If you are undergoing treatment at a hospital or other medical facility on the effective date of the proficiency pay award, you *are not* eligible to receive proficiency pay until returned to duty. If, however, you are returned to duty before the limiting date specified in the Naval Examining Center Proficiency Rating Letter, you may be awarded proficiency pay on the effective date listed in the letter—but even then, only if you are in all respects still eligible for such award.

(If you are returned to duty after the limiting date specified in the Proficiency Rating Letter, authority to award proficiency pay must be requested from the Chief of Naval Personnel, Pers B223.)

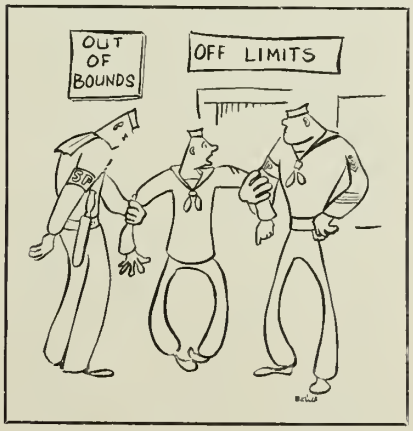
- NEC 990 series (men in programs such as UDT) personnel who are serving in or instructing in such special skills.
- Members advanced in pay grade as the result of an advancement test given before the pro-pay test, or who are advanced during the period they are receiving pro-pay, may continue to draw the extra money for the normal period.
- Personnel assigned recruiting duty (exclusive of YN, PN, SK, DK and HM filling recruiting support billets) will compete for proficiency pay based on their special qualifications and outstanding performance as recruiters. Those selected will be designated R-1 rather than P-1.

BuPers Inst. 1430.12A also lists the conditions under which proficiency pay may be revoked. Your commanding officer may *revoke your pro-pay* under the following circumstances:

- If you fail to requalify on the next proficiency examination after you acquire proficiency pay. Revocation will be effective one year from the date that such pay was awarded. (The only exception to the one-year period is the 18 months of pro-pay which E-6 and E-7 personnel will get as a result of the last examination.)
- If, in the opinion of the commanding officer, you fail to maintain the required degree of proficiency.
- If you are receiving proficiency pay and are changed to a different rating, unless you are found to be eligible for pro-pay in the new rating. (Request for determination of eligibility shall be submitted to the Chief of Naval Personnel in each case.)
- If you are receiving proficiency pay and are appointed to commissioned or warrant status.
- If you fail to reenlist on board within 24 hours following discharge or to extend your enlistment. Proficiency pay will be revoked one day before the expiration of active-duty obligated service, or on the date of transfer for separation, whichever is earlier.
- If you are reduced in rating. However, proficiency pay may not in itself be revoked as a punitive measure.
- If you are reassigned to any duty not requiring the skill on which the proficiency pay is based, including permanent assignment to a course of instruction outside the skill, or not considered a special military program such as the Nuclear Power Program, as described above.
- Personnel advanced to pay grade E-8 shall have proficiency pay revoked on the day preceding the effective date of advancement.
- Personnel assigned to recruiting duty (except YN, PN, SK, DK and HM filling recruiting support billets) shall have proficiency pay revoked effective the day preceding the date of transfer to such duty.
- Personnel detached from recruiting duty (except YN, PN, SK, DK and HM filling recruiting support billets) shall have proficiency pay revoked effective the day preceding date of transfer.

Proficiency pay can not be used as part of your pay when you reenlist. BuPers Inst. 1430.12A says "Any proficiency pay step held when discharged for reenlistment shall be continued, however, reenlistment bonus and payment for unused leave shall be paid according to pay grade held at discharge, excluding pro-pay."

All Navy Cartoon Contest
L. Murdock, SMSN, USN



"But I have an out of bounds pass."

Latest List of Motion Pictures Scheduled for Distribution To Ships and Overseas Bases

The latest list of 16-mm. feature movies available from the Navy Motion Picture Service, Bldg. 311, Naval Base, Brooklyn 1, N. Y., is published here for the convenience of ships and overseas bases. The title of each picture is followed by the program number.

Those in color are designated by (C) and those in wide-screen processes by (WS). Distribution began in October.

The Alligator People (1387)(WS): Melodrama; Beverly Garland, Bruce Bennett.

The Nun's Story (1388) (C): Drama; Audrey Hepburn, Peter Finch.

Born to Be Loved (1389): Drama; Carol Morris, Vera Vague.

Don't Give Up the Ship (1390): Comedy; Jerry Lewis, Dina Merrill.

John Paul Jones (1391) (C) (WS): Drama; Robert Stack, Marisa Pavan.

Face of a Fugitive (1392) (C): Western; Fred MacMurray, Lin McCarthy.

Gideon of Scotland Yard (1393): Melodrama; Jack Hawkins, Dianne Foster.

Ten Days to Tulara (1394): Melodrama; Sterling Hayden, Grace Raynor.

South Pacific (1395) (C) (WS): Musical; Rossano Brazzi, Mitzi Gaynor.

Road Racers (1396): Melodrama; Joel Laurence, Sally Fraser.

The Legend of Tom Dooley (1397): Melodrama; Michael London, Jo Morrow.

The Hangman (1398): Western; Robert Taylor, Tina Louise.

The Big Circus (1399) (C) (WS): Drama; Victor Mature, Red Buttons.

Ten Seconds to Hell (1400): Drama; Jeff Chandler, Jack Palance.

Black Tent (1401) (C): Melodrama; Anthony Steel, Donald Sinden.

The Horse Soldiers (1402) (C): Drama; William Holden, J. Wayne.

If You're Eligible for Recruiting Duty This May Interest You

Are you a petty officer of extremely high caliber?

Have you been on sea duty for some time now, and are you looking forward to some "choice" shore duty?

Will your CO recommend you for recruiting duty?

If you can answer "yes" to all of these questions, then stop sweating. All you have to do is apply and, if qualified, your dreams will be fulfilled.

Your chances of being assigned to recruiting duty now, or in the near future, are very good. At present there is a shortage of qualified personnel desiring recruiting duty.

Although there is an immediate need for recruiters, it must be pointed out that openings are not available in all geographical areas. Recruiters are particularly needed for the 4th, 5th, 8th and 9th Naval Districts. Personnel requesting these districts normally receive orders faster than those requesting other districts.

A Navy recruiter must be a high-caliber individual because he is, in many instances, the Navy's sole representative in a community. As such, he must take part in many community activities. He has the opportunity to use his personal ingenuity and initiative in one of the most challenging and interesting billets in the Navy.

Recruiting is no easy job. Those who are inclined to take it easy and are looking for a "soft" billet should not request recruiting duty. (All persons assigned to recruiting duty are expected to maintain the high standards of the Navy and their conduct must be exemplary at all times.)

If you feel that you meet these standards and are willing to accept the unlimited challenges of recruiting duty, then here are the other qualifications that you must meet before you can apply:

- You must be on Seavey; that is, be eligible for shore duty.
- You must have a GCT score of 50 or above. (A waiver of five points will be considered by the Chief of Naval Personnel, if you are otherwise qualified and highly recommended.)
- You must hold a valid (Navy) motor vehicle operator's license.
- You must have a clear record and show evidence of financial stability and sobriety during current and last previous enlistment. (A clear record is interpreted as one which does not contain official entries indicating conviction by courts-martial or nonjudicial punishment awarded at captain's mast.) It should also be pointed out that your complete record — since you first enlisted — is checked in the Bureau to determine if you are qualified for recruiting duty.
- You must be above average in your individual character traits, sense of humor and forcefulness.
- You must be a career Navyman and provide positive evidence of being completely convinced of the advantages of a Navy career.
- You must have the ability to meet the public and have the personal qualifications for independent duty.
- You must be persuasive in conveying ideas and information, whether in personal contact or in writing.
- You must have a cooperative attitude, as indicated by helping others.
- You must have the ability to converse intelligently on Navy and general subjects.
- You must demonstrate your ability to deal successfully with problems involving ideas and people.
- You must have no speech defects or a marked foreign accent and you must make a presentable appearance.

Your commanding officer should interview and evaluate you on these personal-characteristic requirements before he recommends you for recruiting duty. If you get his unqualified endorsement, you may then apply for recruiting duty when you fill out your Seavey Rotation Data Card.

Your Seavey data card must be prepared and submitted in accordance with par. 4.3 of the *Enlisted Transfer Manual* (NavPers 15909). When you fill out your Seavey data card, be sure that you indicate Recruiting Duty (Code 1-6) as your broad duty preference. In selecting the locality of your choice, do not list two or more cities under the same main station, as this actually wastes one of your choices. In this respect, you are encouraged to make use of the "anywhere" selection and thus increase your opportunity for selection to recruiting duty. Para. 25.6 of the *Enlisted Transfer Manual* gives a complete listing and code for the cities which have recruiting billets.

Complete instructions on filling out your Rotation Data Card can be found in Chapter III of the *Enlisted Transfer Manual.*

In the event your rotation data card has already been submitted and you have not as yet received orders to shore duty, you may still request recruiting duty. This can be done

Dedication of School

Weymouth, Mass., has named its newest public school after a retired Navyman who earned the Medal of Honor in 1900 as a seaman fighting in China during the Boxer Rebellion.

The dedication of the "William Seach School" now gives the town three public schools named for Weymouth men who have earned the nation's highest award for heroism in combat. Each of the three heroes served in a different branch of the armed forces and earned the medal in a different conflict.

LT William Seach, USN, Ret., is the only one of the group who lived to see the school named in his honor. The other two were Ralph Talbot, who earned the medal as a Marine in World War I and Elden Johnson, a World War II Army man.

The naming of the school for LT Seach is unique, since the by-laws of Weymouth forbid the naming of a public building for a living person. However, through a unanimous vote at the town meeting and the concurrence of the town officials and the school committee, the break with precedent was approved.

LT Seach was an ordinary seaman on board USS *Newark* at the turn of the century, when the wave of anti-foreign violence known as

through a specdletter from your command to the Chief of Naval Personnel (Attn: Pers B21s) requesting that your duty preferences be changed in accordance with para. 3.36 of the *Enlisted Transfer Manual.*

Personnel assigned to recruiting duty are divided into two categories —canvasser-type recruiters and support personnel.

Canvasser-Type Recruiters consist of CPOs and PO1s in all rates on the Seavey, except for a few critical ratings and YN, PN, SK, DK and HM. Personnel selected for duty as canvasser-type recruiters will be ordered by the Chief of Naval Personnel to report to NTC Bainbridge of San Diego for six weeks of temporary duty under instruction at the Recruiter's School. All canvasser-type recruiters must attend this school even though they have been on recruiting duty before.

Upon successful completion of this school, a recruiter reports to a designated Navy Recruiting Station for temporary duty and further assignment by the officer in charge, since the Recruiting Service is organized on a district basis and each Navy Recruiting Station has sub and branch stations. All canvasser-type recruiters, however, usually receive their ultimate assignments while attending the Recruiter's School. This enables them to make necessary arrangements in connection with dependents and household effects before leaving school.

Support personnel are, as the name implies, those who ordinarily do not perform duties of the canvasser-type recruiter. They usually do not attend school before being assigned to this duty. Support personnel include YNs and PNs in pay grade E-3 through E-9; SKs and DKs in pay grades E-6 through E-9; and HMs in grades E-5 through E-9.

Support personnel in these ratings are ordered to fill the allowances of Main Recruiting Stations, Class A Substations and Armed Forces Examining Stations.

All personnel—support and canvasser-type recruiters alike—ordered to recruiting duty are normally granted 30 days' delay in reporting.

Waves may also apply for recruiting duty in accordance with instructions contained in Chapter 14 of the *Enlisted Transfer Manual.*

Named for Navyman Recalls Career Packed With Action

the Boxer Rebellion swept China. At Pekin the personnel of the foreign legations, along with their families and the legation guards from various nations, were besieged by the Chinese. So, an International Allied Expeditionary Force, composed of over 2000 Navymen and Marines from the warships of eight nations, was organized in June 1900 as the "Pekin Relief Expedition," commanded by British VADM Sir Edward Seymour. The force ran into such heavy fighting between Tientsin and Pekin that it didn't get to the capital city until 14 August, and by then it had been made a part of an international army which totalled 18,600 men.

The inscription on the reverse side of the lieutenant's medal reads:

"*For conspicuous conduct in the presence of the enemy, in battles of the 13th, 20th, 21st and 22nd of June 1900, while with the Relief Expedition under Vice Admiral Seymour—William Seach, Ordinary Seaman,* USS Newark."

The lieutenant was born in London, England, on 23 May 1877. At the age of eight he worked from 0430 until school time on weekdays delivering milk on a pushcart route. On Saturdays and Sundays he worked until noon. When he was 11 years old he left school to work over 12 hours a day in a factory. After that he spent a year in the school and training ship *Warspite,* an all-sail, line-of-battle ship captured from the French during the Napoleonic Wars. Then, he served two years as Ship's Boy at $5.00 per month on the full-rigged ship, *Canada,* of Nova Scotia.

In 1898, when President McKinley called for men to serve during the war with Spain, Seach volunteered as an ordinary seaman in the United States Navy. During the war he served in USS *Lancaster,* the battleship *Oregon,* the cruiser *Newark* and several other ships. Besides China, his career took him to the Philippines, Central America and Africa.

During World War I he served in USS *Connecticut, McKean* and the troopship, *President Lincoln.* The troopship was sunk by the German submarine, U-90.

Three torpedoes exploded inside *President Lincoln's* hull, sending her to the bottom in 18 minutes. Although 26 members of her crew were lost, all the soldier passengers were saved. The survivors spent over 19 hours drifting about the cold Atlantic.

At one point, the sub surfaced and cruised among the rafts and boats. Seach was beckoned to the U-boat from his raft, and was partly on board when an officer of higher rank—LT Edouard V. M. Izac—was taken from a nearby boat and made a prisoner of war. Then, Seach was pushed back off the sub and into his raft. Hours later U. S. destroyers rescued the survivors and took them to Brest, France.

[LT Izac, while a prisoner, obtained valuable information about the movements of German submarines. He risked death to escape and carry that information back to U. S. and Allied naval authorities—an action which brought him the Medal of Honor. See ALL HANDS, April 1953, p. 59.]

After his return to the United States LT Seach was hospitalized and later retired for disability incurred in the line of duty. He made his home in Weymouth, where his children and many of his grandchildren attended school.

A bronze plaque in the school named for him bears these words:

WILLIAM SEACH SCHOOL
this tablet erected in honor of
LIEUTENANT WILLIAM SEACH,
U. S. NAVY.
A Citizen of WEYMOUTH
who was awarded the
CONGRESSIONAL MEDAL OF HONOR
for outstanding heroism in CHINA during
the BOXER REBELLION of 1900.
May the Glorious Deeds of Man be an
Inspiration to our Children.

Ever Heard of Eleuthera? It's a Good Example of Island Duty

EVER SINCE WE TOLD YOU about living conditions in Chichi Jima (on pages 46-47 of the May 1959 issue), we couldn't help but daydream just a little bit about pulling duty in such a place.

Now, we've found another one—Eleuthera — in the Caribbean. We can only say it sounds good. The duty is up to you. This is what the people on the scene have to say about it:

Innumerable bays and inlets give the narrow 100-mile arc of Eleuthera a rather ragged profile from the air. The Atlantic on the east and the Caribbean on the west have worn away the coral to give the island its placid bays where pleasure boats from the United States and Nassau anchor. The most avid skindivers and fishermen would be unable to exhaust the possibilities these bays offer.

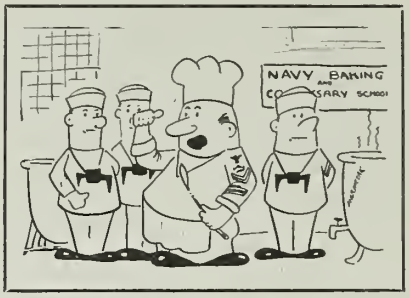
Temperatures range from 72-90 degrees. May through October is usually the warmest time, with high humidity and rain. The tourist from North America is the island's greatest asset.

Eleuthera is a British Crown Colony, with the London-appointed governor residing in Nassau. The island commissioner lives in Governor's Harbour, the 300-year old capital of the island. Other settlements include Hatchett Bay, a settlement where many Navy Facility and Hatchett Bay plantation personnel reside, Alicetown, Gregory Town, Palmetto Point and Rock Sound, a resort settlement.

Clothing—Light summer clothing is advisable for most of the year. Sweaters or light jackets and coats may be comfortable in the evening. Cotton sport shirts and slacks comprise off-base casual wear. Cotton and dacron garments are recommended owing to lack of dry cleaning facilities on the island. Civilian clothing is advisable for off-duty station hours.

Regulation uniform is required for military personnel. The enlisted working uniform is usually dungarees with the tropical uniform or white T-shirts and khaki shorts optional. Officers and chiefs wear wash khaki trousers and short-sleeved shirts. It is strongly advised that military personnel have at least six sets of working uniforms and whites before coming to the island. Underwear and socks may be purchased at the ship's store.

David J. Majchrzak, DN, USN



"Here you'll learn to cook food just like mother."

Banking and Money—The English system of exchange is used on the island, although merchants readily accept United States currency. It is recommended that checking and saving accounts be maintained in the United States. Naval personnel are paid in U. S. currency.

The table below is listed for information and convenience. The pound fluctuates plus or minus a few pennies from day to day and the table below represents an average.

Sterling into Dollars

3d	"Thrupence"	4¢
6d	Six pence	7¢
1/—	One shilling	14¢
1/3	One and three	18¢
1/6	One and six	21¢
2/—	Two shillings	28¢
2/6	Half a crown	35¢
5/—	Five shillings	70¢
7/6	Seven & six	$ 1.07
10/—	Ten shillings	$ 1.41
15/—	Fifteen shillings	$ 2.12
17/6	Seventeen and six	$ 2.47
£1	One pound	$ 2.82
£5	Five pounds	$14.10

Naval Facility — The facility was commissioned in October 1958. All buildings are constructed of cement block. The barracks have two decks and are partitioned into cubicles designed for occupancy of four men each. There are double rooms for CPOs. A laundry, a library of approximately 600 volumes and a dayroom are included in the EM barracks.

Other buildings on the base include an administration building, a garage, a ships building, an air-conditioned auditorium and movie hall, galley and mess hall, BOQ and a recreation hall which includes a soda fountain, EM club, barber shop, ship's store, and a commissary.

Dependent Travel — Dependents must travel to the island by commercial carrier under United States jurisdiction, where available. United States domestic airlines maintain schedules to Nassau. Transportation from Nassau to Eleuthera must be made on British Airlines or commercial boat. Failure to make use of United States domestic carriers to Nassau will void all travel claims made on foreign carriers, where domestic transportation was available.

Housing—Government housing for dependents is not available nor is such construction anticipated in the near future. Experience has shown that commercial housing is difficult to obtain, and a waiting period of three to four months can be expected. Housing and approval by the commanding officer must be obtained before dependents' entry is authorized.

Military personnel live in Hatchett Bay and Governor's Harbour. These towns are 15 and eight miles from the facility respectively. Rents run from $80-150 per month. Most of the homes are furnished; however, personal household items such as linen, dishes and electrical appliances are usually brought. Some homes do not have electricity. Television reception is not worthwhile. Household effects are shipped from Commanding Officer, Army Terminal Unit, Port Canaveral, Fla., by LSMs.

Electricity and water are, in most cases, not included in the house rental. Cost for these utilities is approximately $5.00 per month for water and $10.00 to $60.00 per month for electricity. Propane gas is available. Maids may be hired for $1.00 to $2.00 per day.

Purchasing Facilities—Food is sold on the base through commissary store sales with nearly all staple food items available. Local commercial stores carry a limited selection of American-brand items, but these items are generally quite expensive.

Some may be purchased from door-to-door vendors at reasonable prices. Locally grown pineapples and watermelons are delicious.

The ship's store carries toilet articles, limited uniform items, cigarettes, and liquor. Film and some gift items are also carried, and special orders can be placed. Dry cleaning facilities are not available on the island. However, facilities are available in Nassau and personal arrangements may be made with island boat captains to deliver and pick up.

Per Diem Allowance — Personnel with dependents living on the island receive station per diem to augment regular allotments. Enlisted men receive approximately $2.00 per day, depending on their rating and number of dependents. Officers receive a per diem allowance of approximately $2.50 per day, depending on their rank and number of dependents. Enlisted men also receive $1.15 per day commuted rations. (Total of approximately $3.15 per day.)

Health and Medical Facilities — Limited medical care is administered by a qualified Hospital Corpsman for service personnel and dependents. A small dispensary is maintained on the facility. Emergency medical and surgical first aid facilities are available. The facility has a portable resuscitator-inhalator-aspirator.

Dental care is not available at the facility. Military personnel requiring dental treatment are sent to the United States. A dentist is available three days a week at Governor's Harbour.

The Princess Margaret Hospital in Nassau is the nearest civilian hospital and can handle all types of surgery except brain surgery.

Pregnancy and post-pregnancy present certain problems owing to lack of medical facilities on the island for examination and consultations. Patients must go to Nassau for this care. You should not bring children to the island until they are at least three months old. Expectant mothers who are within three months of delivery are encouraged to return to the United States for delivery.

The following immunizations are required:

Smallpox Initial vaccination with a booster every three years.

Tetanus-Diphtheria. A basic series consisting of three intramuscular injections of 0.5-1.0 cc. The second injection will be given one to two months after the first, and the third 12 months after the first with a booster every 4 years.

Influenza Vaccine. Annual stimulating dose beginning 1 October. All dependents under 15 years old are required to have a Schick negative status or be immunized against diphtheria.

Polio. All personnel under 40 years of age are required to have or begin taking series of three inoculations before transfer to overseas duty.

Typhoid-Paratyphoid. A basic series consisting of three subcutaneous injections of 0.5 cc administered at 7-28-day intervals, booster every three years.

Transportation—Air Force planes make daily flights from Monday through Saturday to the island with mail and personnel. Commercial airlines maintain daily schedules to the island from Nassau.

The island receives supplies from Cape Canaveral, Fla., via LSM approximately twice monthly. Commercial boats (passenger and freight) arrive at various ports in Eleuthera.

Commercial traffic on the island is limited to a few cabs and buses. The latter make one trip up and down the island five or six days a week. The schedule is somewhat undependable. Private vehicles are the only practical means of transportation on the island.

Automobile—You may bring your car to the island if you qualify under current regulations (*BuSandA Manual*, Para. 29200,1 a). Automobiles must be driven to Army Terminal Unit, Port Canaveral, Fla. Cars must be adequately insured before a base pass will be issued. Insurance required is $10,000-$20,000 liability and $5,000 prop-

WHAT'S IN A NAME

Fuel Her Up

You may think you've got troubles keeping your finny monster in gas and oil. However, consider your plight if you were to own and operate USS *Ranger* (CVA 61). When the world's largest aircraft carrier said "fill 'er up" at NAS Alameda recently, some three million gallons of jet fuel, avgas and fuel oil were pumped aboard.

Based on current prices, if you gave such an order at a commercial gas station, you'd get a bill for just under $249,000.

Supplying the fuel in this case was the Naval Supply Depot, Oakland. It was the biggest single delivery of fuel to a combatant ship in the depot's history.

Commercial tug and barge assistance normally hired for an operation of this scope was unavailable because of a strike. That threw the entire job of fueling the 60,000-ton super-carrier on the shoulders of five small Navy Yard oilers, and their 11-man crews.

The five oilers made 13 trips, involving more than 160 hours, hauling the fuel from storage areas at Pt. Molate across the bay to NAS Alameda, *Ranger*'s home port.

Repair activity underway aboard *Ranger* would have made fueling operations hazardous during the working day. Thus, most of the transfer of fuel was accomplished during early morning hours.

In all, some 1,750,000 gallons of fuel oil, nearly a quarter of a million gallons of avgas, and about one million gallons of jet fuel were pumped into *Ranger*'s tanks.

The floating service stations delivered the fuel with a smile, but unlike many of their shore-bound counterparts, they didn't provide their customer with trading stamps.

We understand that these stamps are passed out at the rate of one for each 10 cents of the purchase. Sit back and dream. With 2,490,000 trading stamps (or 2075 books) you could get something you've always wanted. Like 231 coffee tables, for instance. Or 207 chrome plated toasters. Or maybe 260 electric razors.

Just 10 such refuelings and there'd be enough stamps to get nearly every crew member an electric razor. Or something.

erty damage. Bahamian out-island licenses must be obtained, and the registration fee is approximately $10.00. Yearly Bahamian driver licenses must be obtained at a cost of approximately $1.50.

There are approximately 100 miles of asphalt-paved roads on the island. The highway is rough, but adequate. Construction was planned with small cars in mind and, therefore, the roads are narrow as a general rule. Have the car undercoated and completely serviced before shipment. Servicing facilities are extremely limited and expensive. Service of American cars other than a few leading makes is practically nonexistent.

Gasoline may be purchased on the base for approximately half of the island price. Tires last about 10,000 to 15,000 miles. They must be ordered from the States.

Schools—A private school through the seventh grade is available on a quota basis in Hatchett Bay. Tuition charges are partially paid by the government. A native public school in Governor's Harbour is available from the first through the eighth grades. The academic level is somewhat lower than the U. S. standards. Many families utilize the Calvert System. The cost is borne by the Navy.

Church Services—Church of England, Roman Catholic and Methodist denominations predominate. Roman Catholic Mass is said every Sunday on the facility and in the settlements. A visiting Protestant minister conducts services weekly at the facility.

Recreation—Movies, vintage 1938-1958, are shown nightly in the base auditorium. A recreation hall is outfitted with a beer bar, pin ball machine, skill pool, and shuffleboard. The day room of the barracks has a pool table. Weekly ball games are

It's Time to Get Hot on Your Deep Freeze Applications

It may not be too late for you to volunteer for duty with the Navy Deep Freeze units supporting the 1960-61 U. S. Antarctic Research Program.

The first call for volunteers went out in BuPers Notice 1300, of 18 Sep 1959, which set a November '59 deadline for receipt of applications by the Chief of Naval Personnel. However, since applications from enlisted men in certain ratings are still being accepted, you may yet be able to get in on the program.

Training for the program will begin in early 1960, and will be followed by deployment to the Antarctic in the fall of 1960. Summer support operations will be conducted during the fall of 1960 and in early 1961, while the wintering-over period will last from late February '61 to the fall of '61.

The first call for volunteers sought enlisted men in these ratings for the wintering-over party during calendar year 1961: ET, RM, YN, PN, SK, DK, CS, SH, SN, MR, EM, EN, DC, SF, CE, CM, EO, BU, SW, UT, CN, AB, AM, AT, AG, AD, PR, AC, PH, AE, AK, AN, DT and HM.

It also sought volunteers in these ratings for summer support operations with VX-6: AD, AM, AT and AE with experience in R7Vs, P2V-7s, R4D-8s, HUSs, R3Ys (or other turbo-propeller qualifiations), and YN, PN, SK, DK, CS, SH, SN, AB, AG, AK, PR, PH, AN, HM, DT, SD and TN.

To qualify for the program you must:

- Be a volunteer.
- Have at least 28 months of obligated service, or agree to extend.
- Be found physically qualified and temperamentally adapted to withstand rigorous living and working conditions in Antarctica. A standard Form 88 and 89 should be completed on each individual and inserted in his health record. The standards for submarine personnel (as listed in Article 15-29 of the *Manual of the Medical Department*) shall be met, except that minimum visual acuity can be as low as 20/40 in one eye and 20/70 in the other, if both are corrected to 20/20 with glasses. Weight limits are the same as the minimums and maximums prescribed for officers.

A psychiatric interview will be conducted if possible. Candidates with a history or evidence of emotional disorder, chronic or recurrent illness for which they require treatment, and those currently in need of medical care will be disqualified. The physical exam and psychiatric interview will be conducted at a hospital if possible.

- Have a clear record and no history of domestic problems or indebtedness.
- Be recommended by your CO on the basis of performance, technical skill, resourcefulness, versatility and interest.

In submitting applications the Enlisted Evaluation Report (NavPers 1339) must be used. Item 18 of that form must show whether or not a dislocation allowance has been paid this fiscal year, and it should include a positive recommendation from your CO. Under Item 10, men volunteering for the wintering-over party will include a signed statement: "I volunteer for Deep Freeze 61." Applications are to be forwarded to the Chief of Naval Personnel (Pers B-21212).

Those selected will be ordered to duty as follows:

- Administration and supply people for the wintering-over party will be directed, on permanent change of station orders, to report to Detachment Alfa, Antarctic Support Activities, Davisville, R. I., about 1 Mar 1960. The rest of the men for the wintering-over party will be ordered to report to Detachment Alfa about 1 May 1960 for indoctrination and training.
- Men in Group IX (Aviation) ratings, selected for the wintering-over party and summer support operations, will be directed on permanent change of station orders, to report to (VX-6), NAS Quonset Point, R. I., between 1 January and 1 March 1960.
- Men who winter over will be issued permanent change of station orders for deployment to the Antarctic.
- Men to replace any who are disqualified after training begins may be ordered at any time during the summer and fall of 1960.

played on a new ball diamond, and courts for volleyball and tennis are available. An organized athletic program also includes table tennis, horseshoes, and pool.

Sporting equipment is available from the Recreation Department. Waters of the Caribbean and the Atlantic provide exceptional opportunities for spear fishing, skindiving, and swimming. White coral beaches provide hunting grounds for colorful sea shells, sunning or just plain beach combing. Duck hunting is fairly good, but all firearms must be registered with the Bahamian authorities and kept in the base armory. A radio ham club is in the formative stages.

Pets—Pets may be brought to the island provided they have been examined and found free of contagious diseases within the previous 24 hours by a competent veterinarian. A certificate of such examination indicating shots given and health condition of the pet should be carried along for presentation in Nassau.

Pointers for the Career Man Planning to Use Korean G.I. Bill for Education

The Chief of Naval Personnel has revised the policy in regard to the "conditional" or unconditional nature of discharges as related to eligibility for educational benefits available under the Veterans Readjustment Assistance Act of 1952—commonly referred to as the Korean G. I. Bill.

The act authorizes education and training at government expense equal to one and one-half times your active service during the period 27 Jun 1950 to the date of your first separation after 31 Jan 1955, up to a maximum of 36 months of such education and training.

However, the regulations state that you must commence this education and training within three years following your first "unconditional" discharge or release after 31 Jan 1955. (The term "unconditional" discharge or release was the reason for the many misunderstandings.)

In the past, all persons separated within three months of expiration of enlistment were considered as having been unconditionally discharged. This decision was based on the premise that they were entitled to the full benefits of a completed enlistment. Three years later this would result in the loss of educational benefits to those discharged within three months of expiration of enlistment for the purpose of immediate reenlistment, while individuals discharged more than three months early for the purpose of immediate reenlistment, having received "conditional" discharges, retained their rights to educational benefits.

In an attempt to correct this situation, the Chief of Naval Personnel revised this policy and established clear cut definitions for discharges of a "conditional" or "unconditional" nature in relation to deadlines under which veterans of the Korean conflict may begin education and training under the Veterans' Readjustment Assistance Act of 1952.

Here's how the Chief of Naval Personnel now defines the nature of discharges under this revised policy:

- "AN UNCONDITIONAL DISCHARGE or release is a discharge or release from active duty which relieves the recipient thereof from any obligation for further continued active service."
- "A CONDITIONAL DISCHARGE or release is a discharge or release from active duty which does not relieve the recipient thereof from any obligation for further continued active service."

Personnel on active duty discharged at any time before the normal date of expiration of their enlistment or the enlistment as voluntarily extended for the express purpose of immediate reenlistment or who cancel voluntary agreements to extend their enlistment earlier than its effective date for the specific purpose of immediate reenlistment are considered NOT to have been eligible for complete separation and the Navy and the Veterans Administration considers this to be a "conditional" discharge.

All other separations, including those which occur before the expiration of obligated service, such as those authorized under early separation programs implementing prescribed strength reductions, are considered "Unconditional" discharges.

Thus, if you served on active duty between the period of 27 Jun 1950 and 31 Jan 1955 and are eligible in all respects, you must begin your education or training within three years after discharge or separation. If you were still on active duty on

HERE'S YOUR NAVY

A navy doctor from the Naval Medical Research Laboratory, Submarine Base, New London, has been dunked in and under the sea innumerable times lately—and in the process he's proved that his theories concerning pilot escape from a sinking aircraft are far from being all wet.

CDR George F. Bond, NMRL's officer-in-charge, used the submarine USS Sea Cat (SS 399) and a jet aircraft cockpit to conduct a series of underwater tests off Key West, Fla., recently.

With the cockpit securely lashed to Sea Cat's afterdeck, and himself equally securely strapped inside the cockpit, Dr. Bond made more than 30 successful escapes from depths of 60 feet, and at speeds up to seven knots (10 feet per second)—the maximum sink rate of two types of Navy carrier planes tested.

Dr. Bond wasn't just out for a swim or a submarine ride. He wanted to

prove a point—that waterflow patterns past the cockpit of a sinking plane will not tend to trap the pilot.

The cockpit's nose faced aft, so that by alternating Sea Cat's bow angle up or down, it was possible to simulate the action of a plane sinking either nose first or tail first. It was found that when the nose sinks first, the pilot is literally swept clear of the aircraft. In the case of a plane sinking tail down, water action forces the canopy open wide enough for the pilot to crawl through.

Dr. Bond feels that the tests demonstrated that a pilot's greatest danger comes not when he hits the water and goes under, but after he clears the cockpit. The concentration now, he thinks, should be placed on teaching carrier pilots what to do after they escape the plane.

A partial cure, the doctor says, would be to train pilots in the buoyant ascent technique taught all submariners. This method of rapid ascent involves exhaling air continuously on the way to the surface, thus equalizing diminishing pressure and avoiding serious and often fatal air embolism.

Among other conclusions drawn from the tests were the need for a free-flooding cockpit, a foolproof canopy lock release and an automatic detaching mechanism for the canopy.

31 Jan 1955, the three-year period begins on the date of your first "unconditional" discharge or release from active duty after that date.

If you were separated on or before 31 Jan 1955 your education and training will terminate on 31 Jan 1963.

If you were separated after 31 Jan 1955, the deadline for finishing your education or training is 31 Jan 1965 or eight years from the date of separation, whichever comes first.

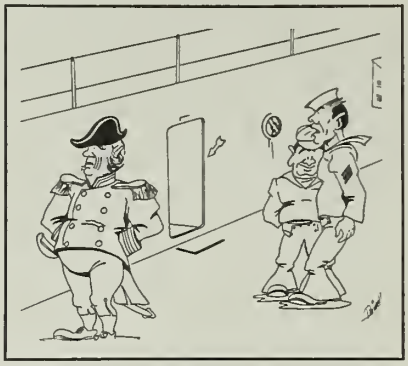
If you are a career man who is planning to apply for the educational and training benefits at the end of your naval career, you must bear in mind that it is definitely to your advantage to request discharge before the expiration of your obligated service for reasons of immediate reenlistment in accordance with the provisions of BuPers Inst. 1133.4A (Subj: Discharge and reenlistment of Regular Navy enlisted personnel within one year of expiration of enlistment date).

It is to your disadvantage to wait until your enlistment is completed before reenlisting, since the three-year period begins on the date of this discharge, at which time there is no obligation for further service even though it is your intention to reenlist. For example, if your enlistment expires on 15 Dec 1959, you should request discharge to be effective no later than 14 Dec 1959 in order to reenlist on board without being penalized by the eligibility requirements.

If you have been discharged since 31 Jan 1955, reenlisted on board your present duty station, and are in doubt as to where you stand, you may submit a request to the Chief of Naval Personnel (Attn: Pers-B222) via your C.O. for clarification of your status relative to the nature of your discharge with respect to educational or training benefits under the Veterans' Readjustment Assistance Act of 1952 in accordance with the provisions of BuPers Inst. 1760.17.

When you have finally been separated from the Navy, and apply to the VA for educational or training benefits, the VA will request a determination from the Chief of Naval Personnel as to the "conditional" or "unconditional" nature of your discharges since 31 Jan 1955. The answer given to the VA will be as indicated in the above policy.

All Navy Cartoon Contest
R. S. Dwinell, EN1 (SS), USN



"Well, yes, some people do consider the skipper to be a little old fashioned."

Rules on Transfer Of Naval Reservists To Regular Navy

Qualified Reservists in open rates, who began their current tours of active duty before 1 Sep 1958, no longer have to wait until their Reserve enlistments are up to go Regular. Instead, an open-rate Reservist in this category, who is not a TAR, can now enlist in the Regular Navy in his current rate upon completion of his active duty obligation.

As under previous regulations, an active-duty, non-TAR Reservist in the pre-September-58 group can still become a Regular at his current rate (regardless of whether it's an open one) by remaining on active duty until his enlistment or extension of enlistment in the Reserves expires. Then he enlists in the U. S. Navy within 24 hours of his discharge, on board the activity from which he is discharged. If he does not wish to enlist in the Regular Navy, he will still be released from active duty upon completion of his active duty obligation.

Latest information on Regular Navy enlistment by Reservists who began their current tours of active duty before 1 Sep 58 is contained in Enclosure Two, of BuPers Inst. 1130.4F, as amended by Change Two. Under the revised enclosure, a Reservist is considered to be in an open rate if he is one of these categories:

- He is now serving in, or has passed an examination for one of the petty officer open rates listed in Enclosure Four, (Change One), of BuPers Inst. 1130.4F.
- He has qualified in all respects, including passing an examination, for a change in rating to a petty officer open rate.
- He is serving in Pay Grade E-3, and is a designated striker for a petty officer open rate.

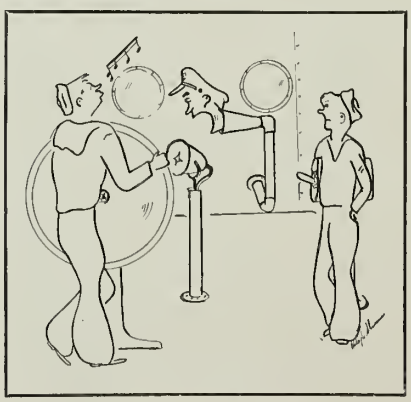
In cases where open-rate Reservists have already executed agreements to extend their obligated active duty to coincide with the expiration of their Reserve enlistments, immediate discharge for the purpose of enlisting in the Regular Navy is now authorized. Article C-10306(1) (c) of the *BuPers Manual* (1959) and BuPers Inst. 1130.4F are to be cited as authority for discharge and enlistment on page 14 of the closed-out service records of open-rate Reservists who go Regular.

The regulations on Regular Navy enlistment by pre-September-58 TARs under the cognizance of district commandants remain unchanged by the revision of Enclosure Two.

They may, if qualified, enlist in the Regular Navy, in current rate, at the expiration of their current Reserve enlistment or extension of enlistment, if they do so within 24 hours of discharge on board the activity from which they are discharged.

If not enlisted in the Regular Navy, they will be released from active duty upon completion of their current Reserve enlistment or extension of enlistment, unless they have been on continuous active duty since 1 Jan 1952 and have 15 years or more of active duty as of 1 Jul 1958. In that case, they may either enlist

All Navy Cartoon Contest
R. C. Shuman, QMC, USN



"I said right full rudder!"

in the Regular Navy within 24 hours of discharge, or they may reenlist in the Reserves and be retained on board as TARs. Those who decide to reenlist in the Reserves and remain TARs will not be eligible for later enlistment in the Regular Navy.

As to extensions of enlistment in the Naval Reserve, Enclosure Two specifies that active-duty Reservists in the pre-September-58 category, not serving as TARs, may agree to extend their enlistments in accordance with Article C-1407 of the *BuPers Manual*, so as to have enough obligated service to attend schools or be assigned to specific types of duty. Those agreeing to such extensions may only cancel these agreements in accordance with the provisions of Article C-1407. Other agreements to extend will not be granted without prior approval by the Chief of Naval Personnel.

Reservists covered by Enclosure Two may be permitted to extend their obligated active duty to coincide with the expiration of their current enlistments or extensions of enlistment by executing agreements to such extensions on page 10 of their service records. The agreement must be signed by the individual and his commanding officer or his CO's designated representative. Such individuals must be physically qualified for sea duty.

USNR "obligors" (either six- or eight-year obligated duty), not serving as TARs, may be permitted to extend their active duty within the period of their military obligation. Agreements to such extensions as these should be made on page 10 of the service record following the reasons and terms set forth in subparagraphs (2)(a) and (2)(b) of Article C-1407 in the *BuPers Manual*.

Extensions of enlistment or of active duty obligations, which conflict with the provisions of Article C-10318 in the *BuPers Manual* or BuPers Instructions of the 1133.12 series, cannot be granted.

ANSWERS TO QUIZ AWEIGH

1. (b) Full dress uniforms.
2. (c) Tropical white long uniforms.
3. (b) "Pig."
4. (c) Sweep mines.
5. (b) PO2.
6. (b) Staff sergeant.

Quiz Aweigh is on page 45.

HOW DID IT START

Banshee

Nearly 15 years ago the Navy awarded a contract to design, construct, and test the XF2H-1. That plane has since been recorded in naval aviation history as the F2H Banshee jet.

During the years since 1945 the Navy has taken delivery of over 800 Banshees. The F2H has been used in almost every type mission available to a single-seat, carrier-based aircraft.

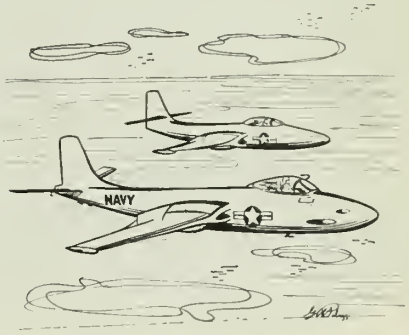
The F2H-2, similar to the F2H-1, with the tanks added, saw action in Korea as both a fighter plane and as a light attack aircraft.

The F2H-2P, photographic version, was the first Navy jet photo plane ever developed. It was used extensively in the early Fifties.

The F2H-3 and 4 were the latest Banshees developed and are considerably larger than their predecessors. They have an attack radar system incorporated which gives them all-weather capabilities.

This year, 1959, marks the final chapter for one of the Navy's most popular aircraft in recent years. VAW-11, Detachment Papa, recently deployed in WESTPAC aboard USS *Hornet* (CVS 12), flew the last operational Banshees in the Pacific. Detachment Papa, with 53 men and six officers, used the F2H-4 all-weather Banshee to provide fighter cover for antisubmarine operations.

Detachment Papa now back at NAS North Island, San Diego, Calif., has swapped their F2Hs for larger and higher performance aircraft. For many Navy pilots, only fond memories of the Banshee are left. The planes are outdated and out of service.



Electronic System Will Keep Inventory of Navy Weapons

The Navy has turned to a transistorized electronic data processing system to keep track of the weapons and ammunition it has ashore and afloat around the world.

The new "501" system was devised by the Bureau of Ordnance and developed by private industry. It will become an important logistics aid to the newly established Bureau of Naval Weapons by providing a worldwide daily inventory of all Navy weapons—from the time they start through the production line until they are expended in training exercises or actual conflict.

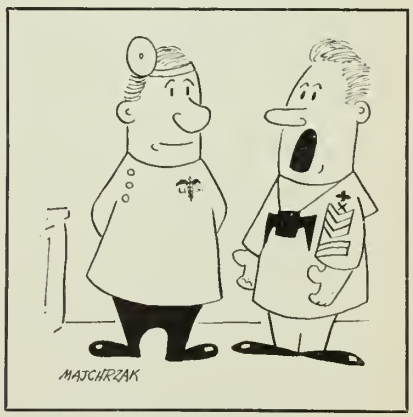
Latest List of Appointments To Rank of Warrant Officer

Three first class and 26 chief petty officers have been issued temporary appointments to Warrant Officer, W-1.

These appointments are from an eligibility list established by a selection board convened last February.

Regular Navy appointments were broken down into the following designators: boatswain (7132), three; aviation ordnance technician (7212), four; ordnance control technician (7242), one; aviation maintenance technician (7412), one machinist (7432), three; electrician (7542), three; communications technician (7642), one; electronics technician (7662), five; ship repair technician (7742), one; ship's clerk (7822), one; supply clerk (7982), four; dental technician (8182), one; photographer (8312), one.

David J. Majchrzak, DN, USN



"I think something's wrong, I'm not sick."

DECORATIONS & CITATIONS

DISTINGUISHED SERVICE MEDAL

"For exceptionally meritorious service to the Government of the United States in a duty of great responsibility . . ."

Gold Star in lieu of Second Award

★ PRIDE, Alfred M,. VADM, USN, for exceptionally meritorious service to the government of the United States in a duty of great responsibility as Commander Naval Air Force, U. S. Pacific Fleet, from 30 Jan 1958 to 1 Oct 1959.

LEGION OF MERIT

"For exceptionally meritorious conduct in the performance of outstanding service to the Government of the United States . . ."

★ BROOKS, Daniel P., CDR, USN, for exceptionally meritorious conduct in the performance of outstanding services as commanding officer of USS *Sargo*, SS(N) 583. Under Commander Brooks' excellent leadership and supervision, Sargo successfully completed an operation of great value to the government of the United States.

★ FREITAG, Robert F., CDR, USN, for exceptionally meritorious conduct in the performance of outstanding services to the government of the United States from 1949 to 1959, in connection with the Naval and National Guided Missile Programs. Exercising unusual technical ability, Commander Freitag has achieved a national reputation as a leader in the fields of guided missiles, rocketry, ranges and space technology. Possessing an extraordinary ability to conceive and execute large problems, he succeeded in developing and 'selling' the Fleet Ballistic Missile concept and program to the Navy and the Secretary of Defense, and participated in the establishment of this weapon system and the Pacific Missile Range.

★ VAN HEUSEN, Lewis J., MRCM, USN, for exceptionally meritorious conduct in the performance of outstanding services while serving on board USS *Sperry* (AS 12) from September 1957 to 15 Nov 1958. Realizing that formation of ice on submarine snorkel valves has long been known as a factor limiting submarine cold-water operations, Van Heusen, on his own initiative, worked untiringly to perfect an electrically heated water-proof blanket encasing the snorkel head valve. This device solved the head valve icing problem, but did not prevent the formation of ice in the snorkel mast. Persevering in the attainment of a better remedy, he succeeded in devising a warm salt-water spray which has given excellent results in the most rigorous laboratory tests and in service at sea.

DISTINGUISHED FLYING CROSS

"For heroism or extraordinary achievement in aerial flight . . ."

★ LEWIS, Morton L. LCDR, USN, (posthumously) for extraordinary achievement in aerial flight as pilot and observer of a two-man, Navy Strato-Lab balloon and gondola during a daring and hazardous ascent into the upper stratosphere on 26-27 Jul 1958. Testing aloft, under actual operating conditions, a new-type, sealed environment in the gondola, LCDR Lewis, determined the maximum effectiveness of this entirely new system, voluntarily removing his helmet and oxygen mask, except for take-off and landing, for the duration of the flight at pressure altitudes ranging from 79,500 feet to 82,000 feet and thus risking his life in the event of decompression. Contributing an unofficial world endurance record for sustained flight in the stratosphere of 34 hours and 39 minutes, he also participated in approximately 27 other scientific experiments.

★ Ross, Malcolm D., CDR, USNR, for extraordinary achievement in aerial flight as Command Pilot of a two-man Navy balloon and gondola during a daring and hazardous ascent into the upper stratosphere on 26-27 Jul 1958. Testing aloft, under actual operating conditions, a new-type, sealed environment in the gondola, which contained a completely artificial atmosphere comparable to that at sea level, Commander Ross removed his helmet and oxygen mask, except for take-off and landing, for the duration of the flight at pressure altitudes ranging from 79,500 feet to 82,000 feet, thereby risking instant death in the event of decompression. In addition to setting a new, unofficial world endurance record for sustained flight into the stratosphere of thirty-four hours and thirty-nine minutes, he successfully completed approximately 27 other scientific experiments.

NAVY AND MARINE CORPS MEDAL

"For heroic conduct not involving actual conflict with an enemy . . ."

★ BEHNKE, Albert R. Jr., CAPT, MC, USN, for heroic conduct while serving with Radiological Defense Laboratory, San Francisco Naval Shipyard, from 31 Jan to 2 Feb 1959. Summoned to treat a civilian skin-diver for an acute and potentially fatal case of decompression sickness, Captain Behnke voluntarily entered a pressure chamber and began administering medical aid and comfort to his patient. He remained under continuous pressure for a period of 48 hours until the victim had responded successfully and was removed from the chamber.

★ HARDER, Kenneth E., MN1, USN, for heroism while serving on board the United States Naval Harbor Defense Unit, San Francisco, Calif., on the afternoon of 8 Jun 1959. Hearing cries for help while he was working in a building adjacent to the dock, Harder immediately rushed out onto the pier and observed two people in the water being swept to sea by the swift current. Quickly removing his clothes, he snatched a life ring, plunged into the treacherous waters and swam a distance of approximately 200 yards to the side of the victims, a father and his three-year-old son. Despite the strong current and cold and choppy waters, Harder managed to keep all of them above water until a rescue craft arrived.

★ STANNUS, Robert D., ENS, USN, (posthumously) for heroism in sacrificing his own life in an attempt to save the life of another, while serving as Officer of the Deck on board the USS *Bexar* (APA 237) on 9 Aug 1959. When a shipmate was swept overboard from the *Bexar* into the heavy seas by a huge wave, Ensign Stannus voluntarily entered the hazardous waters in a daring attempt to effect a rescue. After a safety line had been passed to the victim, Ensign Stannus swam toward the ship, but was dragged beneath the surface of the water by a heavy roll of the vessel and was drowned.

★ PETTIGREW, Daniel, SK1, USN, for heroic conduct in the face of great danger to himself and his party while on an assigned mission during June 1959.

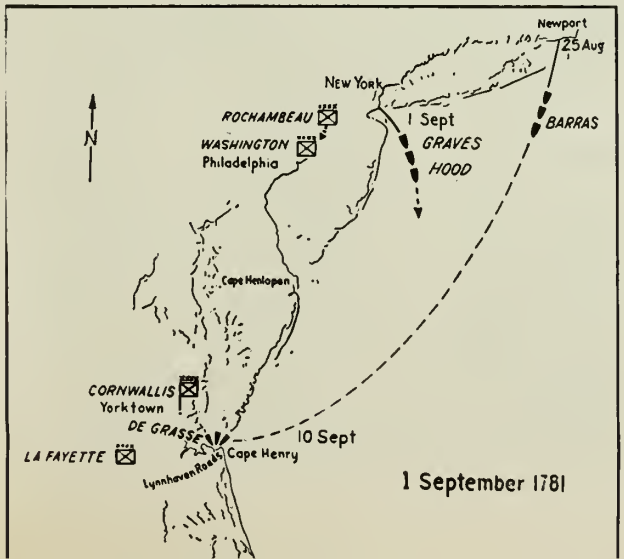
George Washington Meets French

Seapower turns the tide -1781

"To Americans," says famed naval historian Alfred Thayer Mahan, "the chief interest of [the Revolutionary] war is found upon the land; but to naval [personnel the chief interest is] upon the sea, for it was essentially a sea war."

The author of "The Influence of Sea Power upon History" *looked at the American Revolutionary War from what was then a new viewpoint (see the special supplement of* ALL HANDS, *April 1952, p. 59), but it is one that is still not widely known.*

FRENCH and British route to Chesapeake shown on chart.



General George Washington himself had emphasized the vital importance of sea power to help win the freedom of the new states. In a memorandum to a special mission sent to France, he had said:

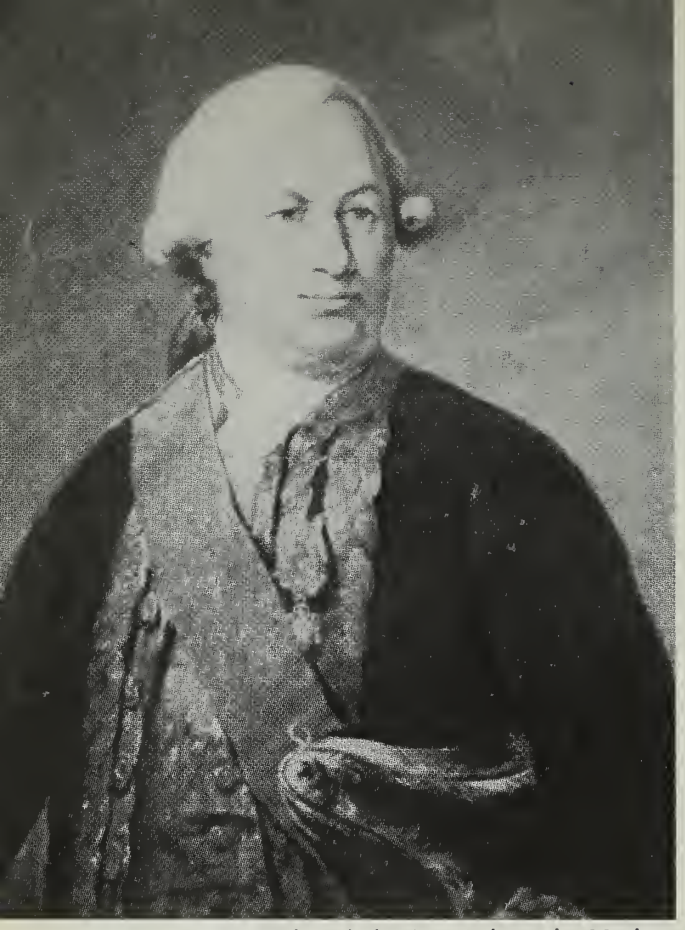
"Next to a loan of money, a constant naval superiority upon these coasts is the object most interesting. This would instantly reduce the enemy to a difficult defensive. . . . This superiority, with an aid in money, would enable us to convert the war into a vigorous offensive. With respect to us it seems to be one of two deciding points."

A graphic account of the decisive naval action of the Revolutionary War, written by Dr. William J. Morgan, head of the Historical Research Section, Naval History Division, Navy Department, was published recently. You don't have to be a student of history to read it and enjoy it.

GENERAL WASHINGTON was at Chester in Pennsylvania on September 5, 1781, moving ahead of his southward-marching Allied army when the great news he had been longing to hear reached him. Admiral Francois Joseph Paul, Comte de Grasse, commanding the French Navy in America, had arrived in Chesapeake Bay six days earlier with a powerful fleet of 28 ships-of-the-line and 3000 troops embarked.

The usually taciturn Washington embraced Rocham-

From "The Pivot Upon Which Everything Turned," by William J. Morgan, appearing in the Spring, 1958 issue of "The Iron Worker," copyright 1958 by Lynchburg Foundry Co., Lynchburg, Va. Reprinted with permission of the copyright owners.



FRENCH FRIEND—Admiral de Grasse brought 28 ships to Chesapeake taking control of the seas from British.

beau and waved his hat furiously in unrestrained joy. At last the naval superiority for which the American commander in chief had pleaded unceasingly, and which he termed "the pivot upon which everything turned," was a reality.

Since the opening months of the Revolution in 1775, while Washington watched the steady flow of supply ships and the King's men-of-war into Boston harbor, the patriotic cause had been hamstrung by Britain's absolute control of the seas. Naval power enabled the British to occupy New York, Philadelphia, Savannah, Charleston, and to strike at will anywhere along the coast. At the same time, Washington's ragged men were obliged to endure long forced marches and one dismal defensive campaign after another to keep the flame of resistance flickering.

The French-American Alliance of 1778 held out the bright prospect of a friendly naval force appearing to challenge the British stranglehold. French squadrons began operating on this side of the Atlantic immediately after the Alliance was formed, but for several disappointing years they were of insufficient strength, and for one reason or another nothing decisive was achieved. Nevertheless, Washington did not swerve from what was to him a fundamental principle—*"whatever efforts are made by the Land Armies, the Navy must have the casting vote in the present contest."*

He sought every opportunity to urge a true naval superiority.

TOWARD THE LATTER PART of March 1781, Admiral de Grasse and 20 ships-of-the-line sailed from Brest, France, for the West Indian cruising grounds. On May 22 the Generals, Washington and Rochambeau, opened an all-important planning conference at Wethersfield, Connecticut. Whether or not de Grasse intended to come in force to the American theatre was not known to the military leaders.

Washington informed Rochambeau of his preference for a coordinated Allied land and naval attack against New York, seat of British administration in America. General Sir Henry Clinton's defensive capabilities at New York had been reduced by the diversion of troops and ships to the campaign in the Southern states.

Although the Wethersfield conferees set New York as the first objective "in present circumstances," they also agreed that the assault "may be directed against the enemy in some other quarter, as circumstances shall dictate." The "other quarter" to which the door was left open was, of course, the South, where at this time neither Washington nor Rochambeau could foresee that Lord Cornwallis would obligingly place his army on a narrow peninsula with its back to the water.

While preparations pointed at New York went forward along the Hudson after the Wethersfield meeting, the pieces leading to the drama of Yorktown began falling into place. By mid-June of 1781, Rochambeau had definite word, which he immediately passed on to Washington, that the French government had ordered de Grasse to bring the greater part of his fleet to North America.

WHERE AND WHEN the French naval force would appear off the coast was de Grasse's decision to make. However, in spite of Washington's known predilection for New York, Rochambeau helped shape the Admiral's thinking when he wrote: "There are two points at which to act offensively against the enemy: the Chesapeake and New York. The southeast winds and the distress of Virginia will probably cause you to prefer the Chesapeake Bay, and it is there where we think you can render the greatest service; besides, it would take you only two days to come to New York."

The swift and elusive frigate *Concorde*, acting as a courier, reached Newport on August 12 with dispatches making known de Grasse's intention to sail from Cape Haitien on August 3 (actually it was not until the 5th that he got underway) for the Chesapeake. De Grasse stressed that time was of the essence since a commitment to act with the Spanish in the West Indies precluded his remaining in American waters after October 15.

This was it. De Grasse was bringing a naval superiority to the Chesapeake, a "circumstance" provided for at Wethersfield, and which now dictated that the New York campaign be abandoned for the "other quarter." The French-American army broke camp and hastily started southward.

MEANWHILE, unaware of the grand design taking shape against them, what moves were the British making? Cornwallis invaded Virginia from North Carolina in May 1781, and moved about the state while Lafayette and Wayne's small force snapped at his heels. By late August Cornwallis was encamped at Yorktown and fortifying that place as well as Gloucester on the opposite bank of the York River.

Lest we write off the English lord as a complete fool for putting his army in what proved to be an impossible position, let us record several salient facts. In the first place Cornwallis had been ordered by Sir Henry Clinton, his superior in New York, to occupy a naval station site

in the Old Point Comfort-Yorktown area. Further, he was confident that Lafayette did not have the strength to contain him if he desired to move out, and he had no way of divining that Washington and Rochambeau were converging on him from the north. And lastly, but most significantly, he never for one moment entertained the thought that the Royal Navy would be forced to yield and abandon him. In short, there seemed to be nothing in the Yorktown situation which spelled "trap" to Cornwallis.

As soon as reliable intelligence established de Grasse's impending move to the American coast, Admiral Sir George Rodney, senior British naval officer on the West Indian station, detached a 14-ship squadron under Rear Admiral Samuel Hood as a reinforcement for New York. At this juncture, Rodney made a fatal miscalculation in estimating the size of the fleet de Grasse would bring to America. Consequently, he did not allow Hood a sufficient number of ships.

Admiral Hood departed Antigua in the West Indies on August 10, five days after de Grasse had sailed from Haiti. Both fleet's took more or less parallel courses but did not fall in with each other on the northward passage. The coopered bottoms of the British ships made them faster sailers than the French. Hood reached the Capes of the Chesapeake August 25, took a look inside, found nothing amiss, and continued on to New York, where the squadron passed under the command of the senior flag officer, Rear Admiral of the Red Sir Thomas Graves.

THIS THEN WAS THE situation on August 30, 1781, when de Grasse's 28 ships entered Chesapeake Bay and came to anchor in Lynnhaven Roads. Cornwallis was digging in at Yorktown, and the British fleet numbering 19 line-of-battle ships was at New York. Washington and Rochambeau's combined armies had reached Philadelphia, while Lafayette waited in position to contest any attempt by Cornwallis to retreat into North Carolina. A French squadron, comprising eight ships of-the-line under Admiral de Barras, was at sea after clearing Newport for the Chesapeake on August 25 with heavy siege guns on board.

De Barras' direction made it clear to the British command that the major Allied effort was being aimed against Cornwallis. Admiral Graves' fleet weighed from Sandy Hook on the first of September hoping to snare de Barras en route and still reach the Chesapeake before de Grasse. The French squadron out of Newport was not found, and the British held their southerly heading without incident to the mouth of the Chesapeake. On Wednesday morning September 5, the scout frigate *Solebay* signaled the presence of a fleet inside the Bay at anchor from Cape Henry to the Middle Ground Shoal. Standing on the quarterdeck of his 98-gun flagship *London,* Admiral Graves had only to scan a long glass rapidly over the forest of tall masts to recognize at once that this was not de Barras, but de Grasse with the main French body. The supreme moment was at hand.

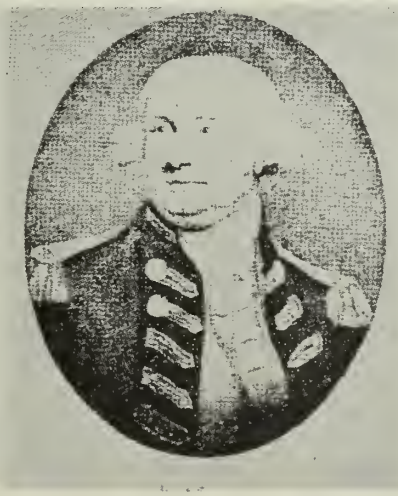
If the Frenchman elected to come out and fight, as most assuredly he would, Graves held the tactical whip hand oft discussed over wardroom pipe and glass but seldom realized. The English ships were in open water bearing down before the wind. On the other hand, de Grasse's lumbering fleet had to gather up crewmen scattered around the harbor on various duties, take in their boats, prepare to get underway, and, when ready, beat out through a narrow channel a few ships at a time.

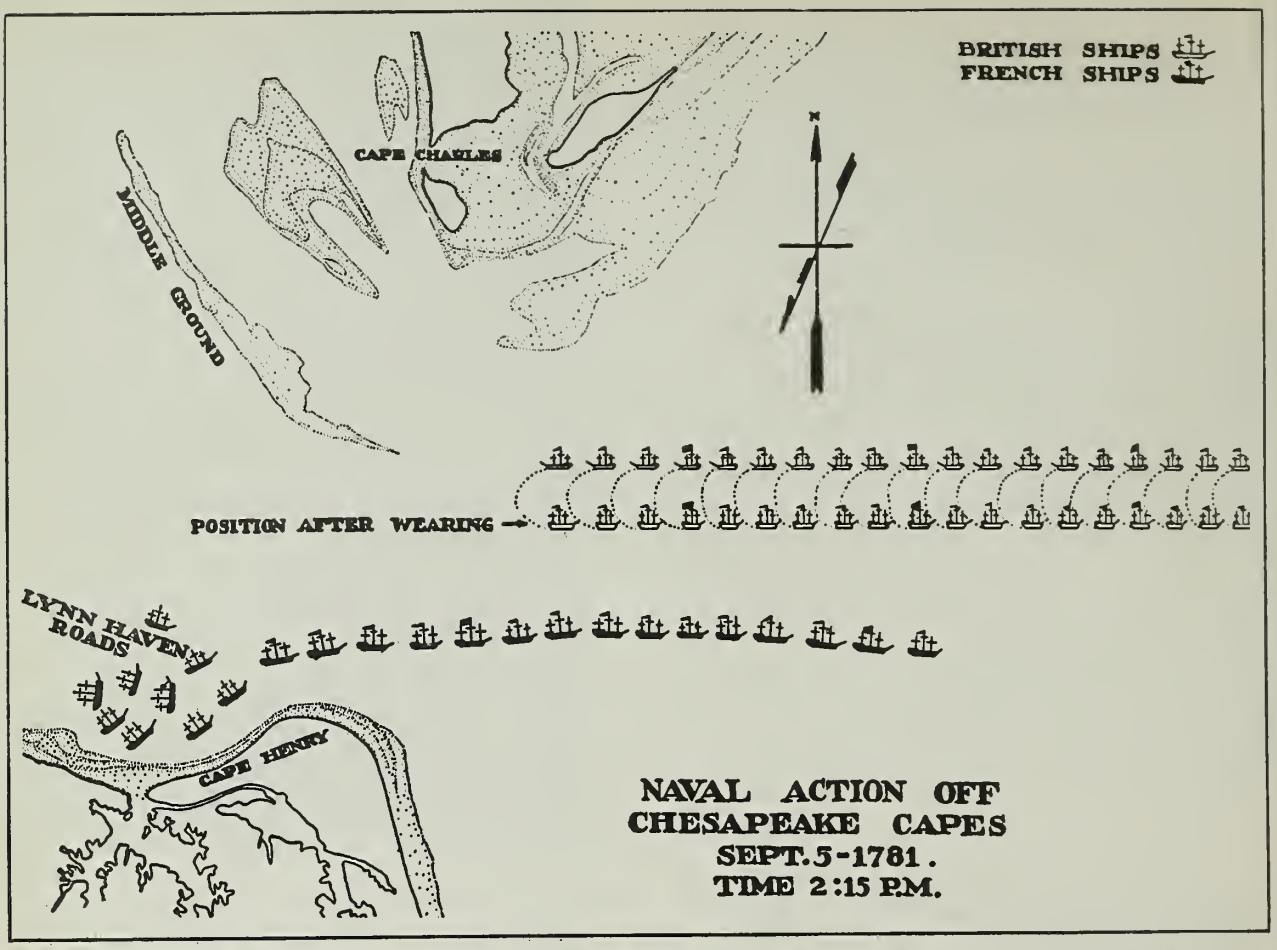
Graves could fall on the disordered French van in force as it straggled out; that is, "gang-up" on the first ships to clear the Bay. In this manner, de Grasse's superiority in ship numbers and weight of metal would have been nullified, and to use the language of military science, the French fleet might well have been destroyed "in detail," i.e., piece by piece.

A Rodney or a Nelson would not have muffed such a golden opening to land the knockout blow, but fortunate it was for American independence that Thomas Graves was neither. His tactical precepts were those of the Royal Navy's venerable and encrusted "Fighting Instructions," based on the classic concept of two opposing lines of battle with ship against ship slugging it out broadside to broadside in the manner of jousting knights. And this is how Graves would fight de Grasse. From *London* went the Admiral's signal to form the "line of battle ahead," distance between ships one cable length (608 feet in the British Navy).

ABOUT NOON the French fleet began standing out on the ebb tide. By two o'clock, the van and center, 16 ships including the huge 104-gun *Ville de Paris* in which de Grasse flew his flag, were well outside the Bay on an

BRITISH BRASS—Top British Navymen in 1781 sea fight were (left to right) ADM Hood, ADM Graves, ADM Rodney.





TURNING POINT—Chart shows how Admiral Graves lined up for battle with French ships of Admiral de Grasse.

easterly course. Graves, still holding the weather gage, ordered his ships to wear, thus bringing the English line parallel to the French and on the same heading. De Grasse's lead ships were then opposite the English center, and Graves did not break the signal "bear down and engage the enemy" until the French line had advanced to a position where van opposed van.

The French ships were all out and formed up at four o'clock when the cannonade opened on both sides. Graves hoisted conflicting signals which utterly baffled the English division commanders and captains as to whether it was the Admiral's intention to maintain the strict line ahead or release ships to seek targets of opportunity. Therefore, the action never became general. Only the van ships were closely engaged, the centers partially at long range, and the rears not at all.

Darkness broke off the fight. Both fleets drifted with wind and water to the south taking stock of damages and casualties. Killed or wounded numbered several hundred on each side. No ships had been taken or sunk, although several were cut up severely, and a British 74, *Terrible,* was in such distress that Graves ordered her to be destroyed by burning.

THE DAY FOLLOWING the battle, the antagonists lay becalmed licking their wounds within sight of each other. For two more days de Grasse and Graves exchanged the weather advantage, yet neither showed any disposition to renew the engagement.

The French and British commanders alike during this

DE GRASSE RETURNS—French cruiser de Grasse brings famous name to Chesapeake at international naval review.

period seem to have suffered mental lapses regarding their primary missions which were, of course, for the one to hem in Cornwallis and for the other to rescue him if need be.

This realization returned to de Grasse first. He crowded on sail and took the wind for the Chesapeake where he arrived on September 11 to find himself happily strengthened by de Barras' squadron.

Graves was shackled by indecision and, much to the disgust of his second in command (Admiral Hood), he delayed some forty-eight hours before following de Grasse. Once it was firmly established that the French had reentered the Chesapeake, a Council of War among the senior British officers considered "the position of the Enemy, the present condition of the British Fleet, the season of the year so near the Equinox, and the impracticability of giving any effectual succour to General Earl Cornwallis in the Chesapeake" and unanimously resolved to return to New York. From the hour of this decision, Cornwallis was lost.

AS A NAVAL ENGAGEMENT, the action of September 5 off the Virginia Capes was a mere brush rather than a head-on clash. *Yet, in its results it has been called, and with good reason, one of the most decisive battles in world history—fought for the prize of a continent.* Command of the sea, albeit local and temporary, passed to the French and American Allies. Neptune smiled on the Americans with a light that was to bring independence.

Washington hastened from Williamsburg, where he had joined Lafayette on September 14, to *Ville de Paris* with warm personal congratulations for de Grasse. During the shipboard visit he extracted an agreement from the Admiral to remain in the Chesapeake until the end of October to prevent their quarry from making an eleventh hour escape.

Cornwallis found it hard to accept the fact that the stout wooden wall at his back was not the heretofore omnipotent Royal Navy and that he had been left irrevocably to his fate. "Nothing," he said dolefully, "but the hope of relief would have induced me to attempt its [Yorktown's] defense." So the land siege with the thundering artillery bombardments, the digging of earthwork "parallels," customary sorties, and gallant storming of redoubts was played out to the inevitable conclusion. But this was anticlimatic, for as the British historian Captain W. M. James states: "the victory in the end was to the holder of the sea line of communications." Lord Cornwallis surrendered over seven thousand men on October 19, 1781.

When the last red-coated British trooper had stacked his arms, and the final drum beats of the melancholy march, "The World Turned Upside Down," had died on the crisp fall air, Washington gratefully wrote de Grasse to thank him "in the name of America, for the glorious event for which she is indebted to you. . . ." The Admiral responded with a masterful understatement: "I consider myself infinitely happy to have been of some service to the United States."

CONTEMPORARY painting shows British fleet attacking French during battle off the Chesapeake Capes in 1781.

TAFFRAIL TALK

WE'RE ALWAYS EAGER to hear how our fellow journalists are making out. That's why we were willing to give our editor-in-charge-of-not-so-vital-statistics (who, of late, has not been highly popular around the office), a reasonably fair hearing.

After intensive study of the *Directory of Ship and Station Newspapers*, our burbling editor-in-charge-etc. informs us that:

There are now current some 437 Navy newspapers with a circulation of 731,509. The largest of these is "Shipworker," published by the N. Y. Naval Shipyard, with a 15,000 public. The smallest is the "Barrier Sentinel," of the picket ship USS *Hissem* (DER 400), with a press run of 15.

The papers are printed with just about every known method of reproduction with the possible exception of pen and ink. Editors are of every pay grade and rank and from all fields and specialties. This includes writing. However, we are not willing to vouch for this statement.

Future researchers will undoubtedly find important clues as to contemporary Navy thought in the titles of many of the publications. The conservative trend is indicated by the 25 "News," 15 "Newsletters," and 8 "Bulletins" to be found in the Directory.

Other types are represented by four "Rockets," three "Jets," three "Missiles," and four "Air Scoops."

The eggheads are adequately represented by *Independence's* "Declaration," by *Sturtevant's* "Fiddler's Green," *Graham County's* "Graham Cracker," and *Gen. W. A. Mann's* "Mann-U-Script."

★ ★ ★

Our miscellaneous-facts-editor has been busy too. He insists upon telling us of new weapons in his arsenal. In this day of the .5 terabuck economy, says he, we can well afford to spend several gigadollars on any number of megapound-thrust rockets. Dig it?

It seems that he has the National Bureau of Standards to thank for this contribution. NBS has threatened to use four new prefixes to designate extremely large and extremely small numbers in the metric system. The prefixes are "tera" meaning one trillion (or a million million); "giga," meaning one billion; "nano," meaning one-billionth; and "pico," meaning one-trillionth.

★ ★ ★

That season has come and gone again. But there has been an upset in the Bean Soup Derby—a shattering of tradition from which the Navy may not sufficiently recover in time for next year's competition.

Third place has been captured by the Army Engineers. This may very well mark the end of Operation Bean Soup, the annual contest to find the best Navy bean soup and bean soup cook in the Navy and, of course, the entire world.

Here are the unhappy details: First place was won—as might be expected—by a Navy commissaryman first class, Edwin H. Busbee, from NAS Norfolk. Second place was won—as might be expected—by PacFlt's USS *Philip* (DDE 498). Third place was won—Oh! Perish the sad day when these words see the light!—by the Army. Our faith in human nature and the validity of publicity campaigns has been shattered.

The All Hands Staff

The United States Navy

Guardian of our Country

The United States Navy is responsible for maintaining control of the sea and is a ready force on watch at home and overseas, capable of strong action to preserve the peace or of instant offensive action to win in war.

It is upon the maintenance of this control that our country's glorious future depends. The United States Navy exists to make it so.

We Serve with Honor

Tradition, valor and victory are the Navy's heritage from the past. To these may be added dedication, discipline and vigilance as the watchwords of the present and future. At home or on distant stations, we serve with pride, confident in the respect of our country, our shipmates, and our families. Our responsibilities sober us; our adversities strengthen us.

Service to God and Country is our special privilege. We serve with honor.

The Future of the Navy

The Navy will always employ new weapons, new techniques and greater power to protect and defend the United States on the sea, under the sea, and in the air.

Now and in the future, control of the sea gives the United States her greatest advantage for the maintenance of peace and for victory in war. Mobility, surprise, dispersal and offensive power are the keynotes of the new Navy. The roots of the Navy lie in a strong belief in the future, in continued dedication to our tasks, and in reflection on our heritage from the past. Never have our opportunities and our responsibilities been greater.

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The Bureau should be kept informed of changes in the number of copies required.

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• AT RIGHT: LADY KILLER — One of the best photos ever taken of a hurricane was snapped on radarscope by Navy photographer, B. J. Dalma, PH2. Dark circular area near center is Gracie's eye.

TEAMWORK